

## Maintenance check sheet

## AC Motor Routine Maintenance

E&amp;M form No.

FM-04-010

Rev. 1Sheet 1 of 1Plant system : FCXIEquipment name : BY PASS DAMPEREquipment code : M113Type code MS8054Frame size 80Voltage (V) 220/400S/N No. G1102Rating (kW) 0.75Current (A) 3.5/2.0Manufacturer ETSTOPower Factor 0.76Frequency (Hz) 50Insulation class F (155°C)I.P. 54Speed (rpm) 1410

Item	Description	Condition					
1	Cleaning of motor frame	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> NO			
2	Inspection of motor frame	<input type="checkbox"/> Damaged		<input checked="" type="checkbox"/> NO Damaged			
3	Doweling and holding down bolts inspection	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
4	Cooling fan and fan cover cleaning	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> NO			
5	Inspection cooling fan and cover	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
6	Inspection Coupling or pulley	<input type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
7	Inspection cable box and terminal connections	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
8	Inspection grouding wire connections	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
9	Stator winding insulation test	U-G	<u>807 MΩ</u>	V-G	<u>926 MΩ</u>	W-G	<u>908 MΩ</u>
10	Stator winding resistance test	U-V	<u>20.8 Ω</u>	V-W	<u>20.8 Ω</u>	U-W	<u>20.8 Ω</u>
11	Running current on load test	U <sub>(A)</sub>	<u>-</u>	V <sub>(A)</sub>	<u>-</u>	W <sub>(A)</sub>	<u>-</u>

Note ☒ Condition can check☐ Condition can't checkPrepared by Technician : Premprach. D.Checked by Engineer : SomkieadDate : 2 Jul 22Date : 9 Jul 22Pichet T.12-Jul-22

## Maintenance check sheet

E&amp;M form No.

FM-04-010

## AC Motor Routine Maintenance

Rev. 1Sheet 1 of 1Plant system : FCXIEquipment name : FLUE GAS DAMPEREquipment code : M111Type code MS8054Frame size 80Voltage (V) 220/400S/N No. G1102Rating (kW) 0.75Current (A) 3.5/2.0Manufacturer ETSTOPower Factor 0.76Frequency (Hz) 50Insulation class F (155°C)I.P. 54Speed (rpm) 1420

Item	Description	Condition					
1	Cleaning of motor frame	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> NO			
2	Inspection of motor frame	<input type="checkbox"/> Damaged		<input checked="" type="checkbox"/> NO Damaged			
3	Doweling and holding down bolts inspection	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
4	Cooling fan and fan cover cleaning	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> NO			
5	Inspection cooling fan and cover	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
6	Inspection Coupling or pulley	<input type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
7	Inspection cable box and terminal connections	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
8	Inspection grouding wire connections	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
9	Stator winding insulation test	U-G	<u>942 MΩ</u>	V-G	<u>913 MΩ</u>	W-G	<u>998 MΩ</u>
10	Stator winding resistance test	U-V	<u>20.9 Ω</u>	V-W	<u>21.0 Ω</u>	U-W	<u>20.9 Ω</u>
11	Running current on load test	U <sub>(A)</sub>	<u>-</u>	V <sub>(A)</sub>	<u>-</u>	W <sub>(A)</sub>	<u>-</u>

Note ☒ Condition can check☐ Condition can't checkPrepared by Technician : Prempracha. D.Checked by Engineer : SomkieadDate : 2 Jul 22Date : 9 Jul 22Pichet T. 12-Jul-22

## Maintenance check sheet

## AC Motor Routine Maintenance

E&amp;M form No.

FM-04-010

Rev. 1Sheet 1 of 1Plant system : FCXIEquipment name : FLUE GAS EXTRATION FANEquipment code : M104Type code SQ108M4Frame size 180Voltage (V) 380/660S/N No. G032070Rating (kW) 18.5Current (A) 32.8Manufacturer ELECTRIMPower Factor 0.9Frequency (Hz) 50Insulation class F (155°C)I.P. 55Speed (rpm) 1475

Item	Description	Condition					
1	Cleaning of motor frame	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> NO			
2	Inspection of motor frame	<input type="checkbox"/> Damaged		<input checked="" type="checkbox"/> NO Damaged			
3	Doweling and holding down bolts inspection	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
4	Cooling fan and fan cover cleaning	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> NO			
5	Inspection cooling fan and cover	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
6	Inspection Coupling or pulley	<input type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
7	Inspection cable box and terminal connections	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
8	Inspection grouding wire connections	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
9	Stator winding insulation test	U-G	<u>1.643 GΩ</u>	V-G	<u>1.704 GΩ</u>	W-G	<u>1.814 GΩ</u>
10	Stator winding resistance test	U-V	<u>0.50 Ω</u>	V-W	<u>0.50 Ω</u>	U-W	<u>0.50 Ω</u>
11	Running current on load test	U <sub>(A)</sub>	<u>-</u>	V <sub>(A)</sub>	<u>-</u>	W <sub>(A)</sub>	<u>-</u>

Note ☒ Condition can check☐ Condition can't checkPrepared by Technician : Premprach. D.Checked by Engineer : SomkieadDate : 2 Jul 22Date : 9 Jul 22Pichet T. 12-Jul-22

## Maintenance check sheet

## AC Motor Routine Maintenance

E&amp;M form No.

FM-04-010

Rev. 1Sheet 1 of 1Plant system : FCXIEquipment name : FLUME GAS EXTRATION FANEquipment code : M107Type code FS-JFrame size 180Voltage (V) 380S/N No. 498Rating (kW) 18.5Current (A) 36.5Manufacturer MISUBISHIPower Factor -Frequency (Hz) 50Insulation class B (130°C)I.P -Speed (rpm) 1460

Item	Description	Condition					
1	Cleaning of motor frame	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> NO			
2	Inspection of motor frame	<input type="checkbox"/> Damaged		<input checked="" type="checkbox"/> NO Damaged			
3	Doweling and holding down bolts inspection	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
4	Cooling fan and fan cover cleaning	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> NO			
5	Inspection cooling fan and cover	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
6	Inspection Coupling or pulley	<input type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
7	Inspection cable box and terminal connections	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
8	Inspection grouding wire connections	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Loose	<input type="checkbox"/> Damage			
9	Stator winding insulation test	U-G <u>2.044 GΩ</u>	V-G <u>2.200 GΩ</u>	W-G <u>2.313 GΩ</u>			
10	Stator winding resistance test	U-V <u>0.60 Ω</u>	V-W <u>0.60 Ω</u>	U-W <u>0.70 Ω</u>			
11	Running current on load test	U <sub>(A)</sub> <u>-</u>	V <sub>(A)</sub> <u>-</u>	W <sub>(A)</sub> <u>-</u>			

Note ☒ Condition can check☐ Condition can't checkPrepared by Technician : Premprach. D.Checked by Engineer : SomkieadDate : 2 Jul 22Date : 9 Jul 22Pichet T. 12-Jul-22

AC Motor condition check														
Item	Description	Condition frame Cooling fan&cover	Remarks	Bolt & Nut Base Motor	Remarks	Cable gland Terminal cover	Remarks	Bearing noise				Running current Test on load		
								DE	Remarks	NDE	Remarks			
1	Flue gas extraction fan M104	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 28.9A	U(A) 12.20	V(A) 12.58	W(A) 13.01
2	Flume gas extraction fan M107	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 32.1A	U(A) 0	V(A) 0	W(A) 0
3	Flue Gas Damper M111	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 3.1A	U(A) 0	V(A) 0	W(A) 0
4	By pass damper M113	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 3.1A	U(A) 0	V(A) 0	W(A) 0
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 

AC Motor Contactor and Overload set point condition check						
Item	Description	Good	Damage	Motor Rate Current (A)	Overload Set point (A)	Remark
1	Flue gas extraction fan Contactor (Good/Damage)	Good		32.8A	38.5	
2	Flume gas extraction fan Contactor (Good/Damage)	Good		36.5A	24.5	
3	Flue Gas Damper Contactor (Good/Damage)	Good		2A	2	
4	By pass damper Contactor (Good/Damage)	Good		2A	2	

All equipment in the machine condition check			
Item	Description	Action	Remark
1	Control Panel Cleaning Inside and Outside	Cleaning inside and outside	
2	PLC Cleaning and tightening	Cleaning and tightening	
3	Sensor and limit SW. Cleaning and tightening	Cleaning and tightening	
4	AC Drive Cleaning	-	

Remarks :

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E&M Department			
Checked	PremprachaoD.	Pichet T.	Supervisor
Date	4 Jul 22	5 Aug 22	Date
			Somkiead
			1 Aug 22

AC Motor condition check														
Item	Description	Condition frame Cooling fan&cover	Remarks	Bolt & Nut Base Motor	Remarks	Cable gland Terminal cover	Remarks	Bearing noise				Running current Test on load		
								DE	Remarks	NDE	Remarks			
1	Flue gas extraction fan M104	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 28.9A	U(A) 12.50	V(A) 12.74	W(A) 12.23
2	Flume gas extraction fan M107	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 32.1A	U(A) 0	V(A) 0	W(A) 0
3	Flue Gas Damper M111	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 3.1A	U(A) 0	V(A) 0	W(A) 0
4	By pass damper M113	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 3.1A	U(A) 0	V(A) 0	W(A) 0
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 

AC Motor Contactor and Overload set point condition check						
Item	Description	Good	Damage	Motor Rate Current (A)	Overload Set point (A)	Remark
1	Flue gas extraction fan Contactor (Good/Damage)	Good		32.8A	38.5	
2	Flume gas extraction fan Contactor (Good/Damage)	Good		36.5A	24.5	
3	Flue Gas Damper Contactor (Good/Damage)	Good		2A	2	
4	By pass damper Contactor (Good/Damage)	Good		2A	2	

All equipment in the machine condition check			
Item	Description	Action	Remark
1	Control Panel Cleaning Inside and Outside	Cleaning inside and outside	
2	PLC Cleaning and tightening	Cleaning and tightening	
3	Sensor and limit SW. Cleaning and tightening	Cleaning and tightening	
4	AC Drive Cleaning	-	

**Remarks :**

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**E&M Department**

Checked
Date

PremprachaoD.
4 Aug 22

Pihet T.
26 Aug 22

Supervisor
Date

Somkiead
26 Aug 22

FM-04-188

Revise 0 / 14-Nov-08

Routine check

AC.Motor and Aux. monthly check

Plant:

Machine Name

Casting Plant

Extraction Fan System

E&M form No.

Rev. 0    Sheet 1 of 1

FM-04-188

AC Motor condition check														
Item	Description	Condition frame Cooling fan&cover	Remarks	Bolt & Nut Base Motor	Remarks	Cable gland Terminal cover	Remarks	Bearing noise				Running current Test on load		
								DE	Remarks	NDE	Remarks			
1	Flue gas extraction fan M104	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 28.9A	U(A) 13.30	V(A) 13.25	W(A) 13.48
2	Flume gas extraction fan M107	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 32.1A	U(A) 0	V(A) 0	W(A) 0
3	Flue Gas Damper M111	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 3.1A	U(A) 0	V(A) 0	W(A) 0
4	By pass damper M113	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 3.1A	U(A) 0	V(A) 0	W(A) 0
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 

AC Motor Contactor and Overload set point condition check						
Item	Description	Good	Damage	Motor Rate Current (A)	Overload Set point (A)	Remark
1	Flue gas extraction fan Contactor (Good/Damage)	Good		32.8A	38.5	
2	Flume gas extraction fan Contactor (Good/Damage)	Good		36.5A	24.5	
3	Flue Gas Damper Contactor (Good/Damage)	Good		2A	2	
4	By pass damper Contactor (Good/Damage)	Good		2A	2	

All equipment in the machine condition check			
Item	Description	Action	Remark
1	Control Panel Cleaning Inside and Outside	Cleaning inside and outside	
2	PLC Cleaning and tightening	Cleaning and tightening	
3	Sensor and limit SW. Cleaning and tightening	Cleaning and tightening	
4	AC Drive Cleaning	-	

Remarks :

☒ To make line in square box.

E&M Department

Checked

Date

PremprachaoD.

2 Sep 22

Pichet T.

29 Sep 22

Supervisor

Date

Somkiead

28 Sep 22

AC Motor condition check														
Item	Description	Condition frame Cooling fan&cover	Remarks	Bolt & Nut Base Motor	Remarks	Cable gland Terminal cover	Remarks	Bearing noise				Running current Test on load		
								DE	Remarks	NDE	Remarks			
1	Flue gas extraction fan M104	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 28.9A	U(A) 12.30	V(A) 12.25	W(A) 12.48
2	Flume gas extraction fan M107	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 32.1A	U(A) 0	V(A) 0	W(A) 0
3	Flue Gas Damper M111	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 3.1A	U(A) 0	V(A) 0	W(A) 0
4	By pass damper M113	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 3.1A	U(A) 0	V(A) 0	W(A) 0
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 

AC Motor Contactor and Overload set point condition check						
Item	Description	Good	Damage	Motor Rate Current (A)	Overload Set point (A)	Remark
1	Flue gas extraction fan Contactor (Good/Damage)	Good		32.8A	38.5	
2	Flume gas extraction fan Contactor (Good/Damage)	Good		36.5A	24.5	
3	Flue Gas Damper Contactor (Good/Damage)	Good		2A	2	
4	By pass damper Contactor (Good/Damage)	Good		2A	2	

All equipment in the machine condition check			
Item	Description	Action	Remark
1	Control Panel Cleaning Inside and Outside	Cleaning inside and outside	
2	PLC Cleaning and tightening	Cleaning and tightening	
3	Sensor and limit SW. Cleaning and tightening	Cleaning and tightening	
4	AC Drive Cleaning	-	

Remarks :
☒
To make line in square box.

E&M Department			
Checked	Premprachad.	Pichet T.	Supervisor
Date	3 Oct 22	28 Oct 22	Date
			Somkiead
			27 Oct 22



FM-04-188

Rev. 0 Sheet 1 of 1

AC Motor condition check														
Item	Description	Condition frame Cooling fan&cover	Remarks	Bolt & Nut Base Motor	Remarks	Cable gland Terminal cover	Remarks	Bearing noise				Running current Test on load		
								DE	Remarks	NDE	Remarks			
1	Flue gas extraction fan M104	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 28.9A	U(A) 12.40	V(A) 12.61	W(A) 12.54
2	Flume gas extraction fan M107	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 32.1A	U(A) 0	V(A) 0	W(A) 0
3	Flue Gas Damper M111	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 3.1A	U(A) 0	V(A) 0	W(A) 0
4	By pass damper M113	<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Loose		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input checked="" type="checkbox"/> OK <input type="checkbox"/> Not Ok	Limit 80% Load 3.1A	U(A) 0	V(A) 0	W(A) 0
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 
		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Not OK		<input type="checkbox"/> OK <input type="checkbox"/> Loose		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		<input type="checkbox"/> OK <input type="checkbox"/> Not Ok		U(A) 	V(A) 	W(A) 

AC Motor Contactor and Overload set point condition check						
Item	Description	Good	Damage	Motor Rate Current (A)	Overload Set point (A)	Remark
1	Flue gas extraction fan Contactor (Good/Damage)	Good		32.8A	38.5	
2	Flume gas extraction fan Contactor (Good/Damage)	Good		36.5A	24.5	
3	Flue Gas Damper Contactor (Good/Damage)	Good		2A	2	
4	By pass damper Contactor (Good/Damage)	Good		2A	2	

All equipment in the machine condition check			
Item	Description	Action	Remark
1	Control Panel Cleaning Inside and Outside	Cleaning inside and outside	
2	PLC Cleaning and tightening	Cleaning and tightening	
3	Sensor and limit SW. Cleaning and tightening	Cleaning and tightening	
4	AC Drive Cleaning	-	

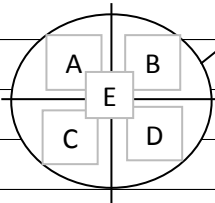
Remarks :

☒ To make line in square box.

E&M Department			
Checked	PremprachaoD.	Pichet T.	Supervisor
Date	2 Dec 22	5 Jan 23	Date
			Somkiead
			5 Jan 23

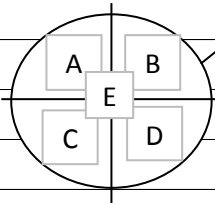
<b>Meyer Aluminium (Thailand)</b>		<b>E&amp;M Department</b>		<u>Mechanical</u>	Section
<b>Monthly maintenance check sheet</b>				E&M form No.	
<u>For Melting furnace maintenance</u>				Rev. <u>2</u>	Sheet <u>1</u> of <u>3</u>
<b>Plant</b>		<b>Casting</b>			
<b>Equipment</b>	<b>MFE</b>	<b>#1</b> <input type="checkbox"/>	<b>#2</b> <input checked="" type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak	remark _____
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak	remark _____
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____

<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	✓	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	✓	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	✓	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	✓	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	✓	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	✓	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning			remark _____
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	✓	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	✓	<input type="checkbox"/> not leak
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	✓	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	✓	<input type="checkbox"/> not leak
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	✓	<input type="checkbox"/> not leak
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	✓	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	✓	<input type="checkbox"/> not leak
<input type="checkbox"/> clean	<input type="checkbox"/> not clean			remark _____
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	✓	<input type="checkbox"/> not leak
✓ <input type="checkbox"/> clean	<input type="checkbox"/> not clean			remark _____
<b>12 Furnace roof general cleaning;</b>				
✓ <input type="checkbox"/> clean	<input type="checkbox"/> not clean			remark _____

<b>13 Furnace common stack fan;</b> (check only MFE1)						
Bearing greasing (EP0= 4 stroke)						
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____				
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>14 Furnace common fume fan;</b> (check only MFE1)						
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)						
Check at suction duct on fume hood.						
Position	A	B	C	D	E	
Air velocity (m/s)	10	11	11	10	10	
Air velocity average $(A+B+C+D+E)/5 =$ <span style="color: blue;">10.4</span> m/s						
<b><u>Conclusion.</u></b>						
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.						
Item	Description				Follow up by	
	MFE2 Install back exhaust fan after overhaul fan and motor				by subcontractor	
Done by E&M Technician :	Checked by E&M Engineer :		Acceptance by Production Staff :		Approved by Assistant / E&M Manager :	
<span style="color: blue;">Somchai</span>	<span style="color: blue;">NIKON</span>		<span style="color: blue;">NARUPON</span>		<span style="color: blue;">NIKON</span>	
Date : <span style="color: blue;">20-JUL-22</span>	Date : <span style="color: blue;">21-JUL-22</span>		Date: <span style="color: blue;">21-JUL-22</span>		Date: <span style="color: blue;">21-JUL-22</span>	

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><u>For Melting furnace maintenance</u></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>3</u>	
Plant		Casting			
Equipment	MFE	#1 <input type="checkbox"/>	#2 <input checked="" type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____

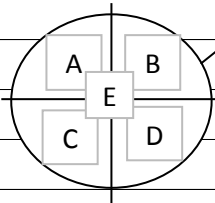
<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	

<b>13 Furnace common stack fan;</b> (check only MFE1)							
Bearing greasing (EP0= 4 stroke)							
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____					
Belt condition and tension check.							
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____				
Fan unit visual for vibration and noise .							
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____				
<b>14 Furnace common fume fan;</b> (check only MFE1)							
Belt condition and tension check.							
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____				
Fan unit visual for vibration and noise .							
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____				
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)							
Check at suction duct on fume hood.							
Position	A	B	C	D	E		
Air velocity (m/s)	11	10	10	10	11		
Air velocity average $(A+B+C+D+E)/5 =$ <span style="color: blue;">10.4</span> m/s							
<b><u>Conclusion.</u></b>							
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.							
Item	Description				Follow up by		
Done by E&M Technician :		Checked by E&M Engineer :		Acceptance by		Approved by	
Somchai		NIKON		NARUPON		NIKON	
Date : <span style="color: blue;">20-AUG-22</span>		Date : <span style="color: blue;">22-AUG-22</span>		Date: <span style="color: blue;">22-AUG-22</span>		Date: <span style="color: blue;">22-AUG-22</span>	



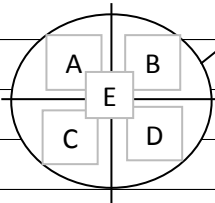
<b>Meyer Aluminium (Thailand)</b>		<b>E&amp;M Department</b>		<u>Mechanical</u>	<b>Section</b>
<b>Monthly maintenance check sheet</b>				<b>E&amp;M form No.</b>	
<u>For Melting furnace maintenance</u>				Rev. <u>2</u>	Sheet <u>1</u> of <u>3</u>
<b>Plant</b>	<b>Casting</b>				
<b>Equipment</b>	<b>MFE</b>	<b>#1</b> <input type="checkbox"/>	<b>#2</b> <input checked="" type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____

<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	

<b>13 Furnace common stack fan;</b> (check only MFE1)						
Bearing greasing (EP0= 4 stroke)						
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____				
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>14 Furnace common fume fan;</b> (check only MFE1)						
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)						
Check at suction duct on fume hood.						
Position	A	B	C	D	E	
Air velocity (m/s)	11	10	10	10	10	
Air velocity average $(A+B+C+D+E)/5 =$ <span style="margin-left: 100px;">10.2</span> m/s						
<b><u>Conclusion.</u></b>						
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.						
Item	Description				Follow up by	
Done by E&M Technician :	Checked by E&M Engineer :		Acceptance by	Approved by		
Somchai	NIKON		Production Staff :	Assistant / E&M Manager :		
Date : 22-SEP-22	Date : 22-SEP-22		NARUPON	NIKON		
			Date: 22-SEP-22	Date: 22-SEP-22		

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><u>For Melting furnace maintenance</u></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>3</u>	
Plant		Casting			
Equipment	MFE	#1 <input type="checkbox"/>	#2 <input checked="" type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____

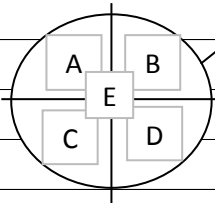
<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	

<b>13 Furnace common stack fan;</b> (check only MFE1)						
Bearing greasing (EP0= 4 stroke)						
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____				
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>14 Furnace common fume fan;</b> (check only MFE1)						
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)						
Check at suction duct on fume hood.						
Position	A	B	C	D	E	
Air velocity (m/s)	11	10	10	10	10	
Air velocity average $(A+B+C+D+E)/5 =$ <span style="color: blue;">10.2</span> m/s						
<b><u>Conclusion.</u></b>						
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.						
Item	Description				Follow up by	
Done by E&M Technician :		Checked by E&M Engineer :		Acceptance by		Approved by
Somchai		NIKON		NARUPON		Assistant / E&M Manager : NIKON
Date : 17-OCT-22		Date : 18-OCT-22		Date: 18-OCT-22		Date: 18-OCT-22

<b>Meyer Aluminium (Thailand)</b>		<b>E&amp;M Department</b>		<u>Mechanical</u>	<b>Section</b>
<b>Monthly maintenance check sheet</b>				<b>E&amp;M form No.</b>	
<u>For Melting furnace maintenance</u>				Rev. <u>2</u>	Sheet <u>1</u> of <u>3</u>
<b>Plant</b>	<b>Casting</b>				
<b>Equipment</b>	<b>MFE</b>	<b>#1</b> <input type="checkbox"/>	<b>#2</b> <input checked="" type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____

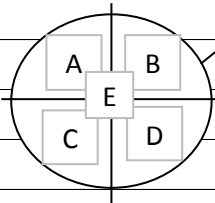
<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	



<b>13 Furnace common stack fan;</b> (check only MFE1)							
Bearing greasing (EP0= 4 stroke)							
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____					
Belt condition and tension check.							
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____				
Fan unit visual for vibration and noise .							
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____				
<b>14 Furnace common fume fan;</b> (check only MFE1)							
Belt condition and tension check.							
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____				
Fan unit visual for vibration and noise .							
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____				
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)							
Check at suction duct on fume hood.							
Position	A	B	C	D	E		
Air velocity (m/s)	11	10	10	10	10		
Air velocity average $(A+B+C+D+E)/5 =$ <span style="color: blue;">10.2</span> m/s							
<b><u>Conclusion.</u></b>							
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.							
Item	Description				Follow up by		
Done by E&M Technician :		Checked by E&M Engineer :		Acceptance by		Approved by	
Somchai		NIKON		NARUPON		NIKON	
Date : <span style="color: blue;">16-NOV-22</span>		Date : <span style="color: blue;">18-NOV-22</span>		Date: <span style="color: blue;">18-NOV-22</span>		Date: <span style="color: blue;">18-NOV-22</span>	

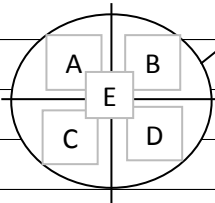
Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><u>For Melting furnace maintenance</u></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>3</u>	
Plant		Casting			
Equipment	MFE	#1 <input type="checkbox"/>	#2 <input checked="" type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____

<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	

<b>13 Furnace common stack fan;</b> (check only MFE1)						
Bearing greasing (EP0= 4 stroke)						
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____				
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>14 Furnace common fume fan;</b> (check only MFE1)						
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)						
Check at suction duct on fume hood.						
Position	A	B	C	D	E	
Air velocity (m/s)	10	10	11	10	10	
Air velocity average $(A+B+C+D+E)/5 =$ <span style="color: blue;">10.2</span> m/s						
<b><u>Conclusion.</u></b>						
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.						
Item	Description				Follow up by	
	Overhaul Exhayst blower, change bearing and shaft alignment				by U-Service	
Done by E&M Technician :		Checked by E&M Engineer :		Acceptance by		Approved by
Somchai		NIKON		NARUPON		Assistant / E&M Manager : NIKON
Date : 16-DEC-22		Date : 17-DEC-22		Date: 17-DEC-22		Date: 17-DEC-22

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><u>For Melting furnace maintenance</u></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>3</u>	
Plant		Casting			
Equipment	MFE	#1 <input checked="" type="checkbox"/>	#2 <input type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable      remark _____	
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable      remark _____	
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable      remark _____	
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/> not leak		remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/> not leak		remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	

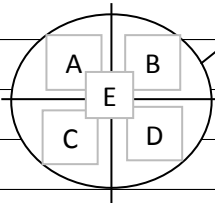
<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	

<b>13 Furnace common stack fan;</b> (check only MFE1)						
Bearing greasing (EP0= 4 stroke)						
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____				
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>14 Furnace common fume fan;</b> (check only MFE1)						
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)						
Check at suction duct on fume hood.						
Position	A	B	C	D	E	
Air velocity (m/s)	11	10	11	10	11	
Air velocity average $(A+B+C+D+E)/5 =$ <span style="color: blue;">10.6</span>						
<b><u>Conclusion.</u></b>						
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.						
Item	Description				Follow up by	
	Change combustion duct flexible joint at B2 side.				Saythong	
Done by E&M Technician :		Checked by E&M Engineer :		Acceptance by		Approved by
Somchai		NIKON		NARUPON		Assistant / E&M Manager : NIKON
Date : 20-JUL-22		Date : 21-JUL-22		Date: 21-JUL-22		Date: 21-JUL-22

<b>Meyer Aluminium (Thailand)</b>		<b>E&amp;M Department</b>		<b><u>Mechanical</u> Section</b>	
<b>Monthly maintenance check sheet</b>				<b>E&amp;M form No.</b>	
<b><u>For Melting furnace maintenance</u></b>				<b>Rev. <u>2</u> Sheet <u>1</u> of <u>3</u></b>	
<b>Plant</b>		<b>Casting</b>			
<b>Equipment</b>	<b>MFE</b>	<b>#1</b>	<input checked="" type="checkbox"/>	<b>#2</b>	<input type="checkbox"/>
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____

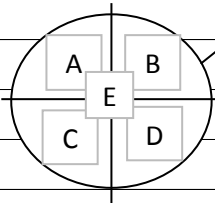


<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	

<b>13 Furnace common stack fan;</b> (check only MFE1)						
Bearing greasing (EP0= 4 stroke)						
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____				
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>14 Furnace common fume fan;</b> (check only MFE1)						
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)						
Check at suction duct on fume hood.						
Position	A	B	C	D	E	
Air velocity (m/s)	11	11	11	10	10	
Air velocity average $(A+B+C+D+E)/5 =$ <span style="color: blue;">10.6</span>						
<b><u>Conclusion.</u></b>						
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.						
Item	Description	Follow up by				
Done by E&M Technician :	Checked by E&M Engineer :	Acceptance by Production Staff :		Approved by Assistant / E&M Manager :		
Somchai	NIKON	NARUPON		NIKON		
Date : 17-AUG-22	Date : 18-AUG-22	Date: 18-AUG-22		Date: 18-AUG-22		

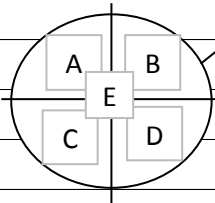
Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><u>For Melting furnace maintenance</u></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>3</u>	
Plant		Casting			
Equipment	MFE	#1 <input checked="" type="checkbox"/>	#2 <input type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____

<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	

<b>13 Furnace common stack fan;</b> (check only MFE1)						
Bearing greasing (EP0= 4 stroke)						
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____				
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>14 Furnace common fume fan;</b> (check only MFE1)						
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)						
Check at suction duct on fume hood.						
Position	A	B	C	D	E	
Air velocity (m/s)	11	11	11	10	11	
Air velocity average $(A+B+C+D+E)/5 =$ <span style="color: blue;">10.8</span>						
<b><u>Conclusion.</u></b>						
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.						
Item	Description				Follow up by	
Done by E&M Technician :	Checked by E&M Engineer :		Acceptance by Production Staff :	Approved by Assistant / E&M Manager :		
Somchai	NIKON		NARUPON	NIKON		
Date : <span style="color: blue;">21-SEP-22</span>	Date : <span style="color: blue;">22-SEP-22</span>		Date: <span style="color: blue;">22-SEP-22</span>	Date: <span style="color: blue;">22-SEP-22</span>		

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><u>For Melting furnace maintenance</u></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>3</u>	
Plant		Casting			
Equipment	MFE	#1 <input checked="" type="checkbox"/>	#2 <input type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____

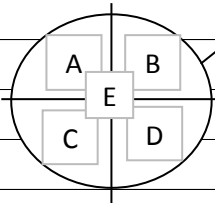
<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	

<b>13 Furnace common stack fan;</b> (check only MFE1)						
Bearing greasing (EP0= 4 stroke)						
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____				
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>14 Furnace common fume fan;</b> (check only MFE1)						
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)						
Check at suction duct on fume hood.						
Position	A	B	C	D	E	
Air velocity (m/s)	11	11	10	10	11	
Air velocity average $(A+B+C+D+E)/5 =$ <span style="color: blue;">10.6</span>						
<b><u>Conclusion.</u></b>						
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.						
Item	Description				Follow up by	
Done by E&M Technician :	Checked by E&M Engineer :		Acceptance by Production Staff :		Approved by Assistant / E&M Manager :	
<u>Somchai</u>	<u>NIKON</u>		<u>NARUPON</u>		<u>NIKON</u>	
Date : <u>17-OCT-22</u>	Date : <u>18-OCT-22</u>		Date: <u>18-OCT-22</u>		Date: <u>18-OCT-22</u>	



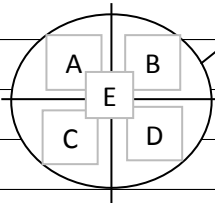
<b>Meyer Aluminium (Thailand)</b>		<b>E&amp;M Department</b>		<u>Mechanical</u>	<b>Section</b>
<b>Monthly maintenance check sheet</b>				<b>E&amp;M form No.</b>	
<u>For Melting furnace maintenance</u>				Rev. <u>2</u>	Sheet <u>1</u> of <u>3</u>
<b>Plant</b>	<b>Casting</b>				
<b>Equipment</b>	<b>MFE</b>	<b>#1</b> <input checked="" type="checkbox"/>	<b>#2</b> <input type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/>		<input type="checkbox"/> not leak      remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable      remark _____
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak      remark _____

<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	

<b>13 Furnace common stack fan;</b> (check only MFE1)						
Bearing greasing (EP0= 4 stroke)						
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____				
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>14 Furnace common fume fan;</b> (check only MFE1)						
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)						
Check at suction duct on fume hood.						
Position	A	B	C	D	E	
Air velocity (m/s)	11	11	11	11	11	
Air velocity average $(A+B+C+D+E)/5 =$ 11						
<b><u>Conclusion.</u></b>						
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.						
Item	Description				Follow up by	
	Overhaul exhaust blower, change bearing and shaft alignment				By U-Service	
Done by E&M Technician :	Checked by E&M Engineer :		Acceptance by	Approved by		
Somchai	NIKON		Production Staff :	Assistant / E&M Manager :		
Date : 16-NOV-22	Date : 18-NOV-22		NARUPON	NIKON		
			Date: 18-NOV-22	Date: 18-NOV-22		

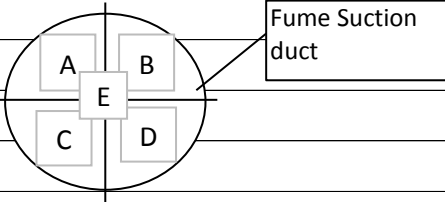
Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><u>For Melting furnace maintenance</u></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>3</u>	
Plant		Casting			
Equipment	MFE	#1 <input checked="" type="checkbox"/>	#2 <input type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable      remark _____	
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
<b>2 Flue gas fan;</b>					
Bearing greasing (EP0= 4 stroke)					
<input checked="" type="checkbox"/> greasing		<input type="checkbox"/> cleaning		remark _____	
Coupling visual for vibration check					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable      remark _____	
Fan unit visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable      remark _____	
Fan impeller cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Suction flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/> not leak		remark _____	
Discharge flexible joint check leak					
<input type="checkbox"/> leak		<input checked="" type="checkbox"/> not leak		remark _____	
<b>3 Flue gas duct reversal valve ;</b>					
For burner #1 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
For burner #2 reversal valve function check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
<b>4 Regenerative ball box unit ;</b>					
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
Hot air leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
Suction flexible joint check leak					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	

<b>5 Damper;</b>				
Wire rope sling function and damage check				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check				
<input type="checkbox"/> low	<input checked="" type="checkbox"/>	<input type="checkbox"/> mid	<input type="checkbox"/> high	refill _____
<b>6 Charging door;</b>				
Check condition for door seal and clamp condition				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
All Steel block lining condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.				
<input type="checkbox"/> damage	<input type="checkbox"/> changed	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____		
<b>7 Male spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<b>8 Female down spout;</b>				
Air cylinder for door closing check leak and function				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Refractory condition check				
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>9 Furnace tilting cylinder;</b>				
Hydraulic cylinder check leak				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)				
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/> acceptable	remark _____
<b>10 All furnace Gas pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____		
<b>11 All furnace air pipe leak check and cleaning ;</b>				
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/>	<input type="checkbox"/> not leak
remark _____				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	
<b>12 Furnace roof general cleaning;</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____	

<b>13 Furnace common stack fan;</b> (check only MFE1)						
Bearing greasing (EP0= 4 stroke)						
<input checked="" type="checkbox"/> greasing	<input type="checkbox"/> cleaning	remark _____				
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>14 Furnace common fume fan;</b> (check only MFE1)						
Belt condition and tension check.						
<input type="checkbox"/> swing	<input checked="" type="checkbox"/> good tension	<input type="checkbox"/> replacement	remark _____			
Fan unit visual for vibration and noise .						
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____			
<b>15 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)						
Check at suction duct on fume hood.						
Position	A	B	C	D	E	
Air velocity (m/s)	11	11	10	11	11	
Air velocity average $(A+B+C+D+E)/5 =$ <span style="color: blue;">10.8</span>						
<b><u>Conclusion.</u></b>						
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.						
Item	Description	Follow up by				
Done by E&M Technician :	Checked by E&M Engineer :	Acceptance by Production Staff :		Approved by Assistant / E&M Manager :		
Somchai	NIKON	NARUPON		NIKON		
Date : 16-DEC-22	Date : 17-DEC-22	Date: 17-DEC-22		Date: 17-DEC-22		

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><i>For Holding Furnace maintenance</i></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant	Casting				
Equipment	HFE	#1 <input checked="" type="checkbox"/>	#2 <input type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable      remark _____	
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable      remark _____	
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid		<input type="checkbox"/> high      refill _____	
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable      remark _____	
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable      remark _____	
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	

<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check; (normal average at &gt;=10 m/s)</b>					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	11	11	11	11	10
Air velocity average (A+B+C+D+E)/5 =					10.8

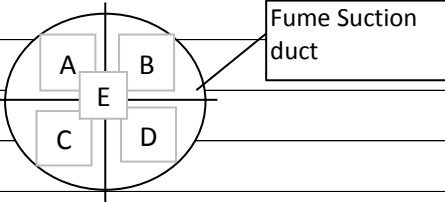


<b>Conclusion.</b>			
<input checked="" type="checkbox"/> no need follow up.		<input type="checkbox"/> need follow up.	
Item	Description	Follow up by	
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by Production Staff :	Approved by Assistant / E&M Manager :
Somchai	Nikon	NARUPON	NIKON
Date : 21-JUL-22	Date : 23-JUL-22	Date: 23-JUL-22	Date: 23-JUL-22



Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><i>For Holding Furnace maintenance</i></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant		Casting			
Equipment		HFE		#1 <input checked="" type="checkbox"/>	#2 <input type="checkbox"/>
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable	remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid	<input type="checkbox"/> high		refill _____
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable	remark _____
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____

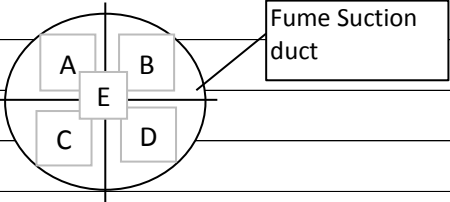
<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check; (normal average at &gt;=10 m/s)</b>					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	10	11	11	11	10
Air velocity average (A+B+C+D+E)/5 =					10.6



<b><u>Conclusion.</u></b>				
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.				
Item	Description	Follow up by		
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by Production Staff :	Approved by Assistant / E&M Manager :	
Somchai	Nikon	NARUPON	NIKON	
Date : 17-AUG-22	Date : 18-AUG-22	Date: 18-AUG-22	Date: 18-AUG-22	

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <i>For Holding Furnace maintenance</i>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant	Casting				
Equipment	HFE	#1 <input checked="" type="checkbox"/>	#2 <input type="checkbox"/>		
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable      remark _____	
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable      remark _____	
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid		<input type="checkbox"/> high      refill _____	
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable      remark _____	
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable      remark _____	
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak      remark _____	
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable      remark _____	

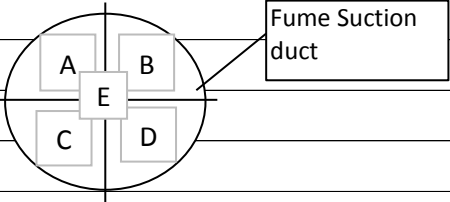
<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	11	11	11	11	10
Air velocity average $(A+B+C+D+E)/5 =$					10.8



<b>Conclusion.</b>				
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.				
Item	Description	Follow up by		
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by Production Staff :	Approved by Assistant / E&M Manager :	
Somchai	Nikon	NARUPON	NIKON	
Date : 21-SEP-22	Date : 23-SEP-22	Date: 23-SEP-22	Date: 23-SEP-22	

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><i>For Holding Furnace maintenance</i></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant		Casting			
Equipment		HFE		#1 <input checked="" type="checkbox"/>	#2 <input type="checkbox"/>
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable	remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid	<input type="checkbox"/> high		refill _____
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable	remark _____
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____

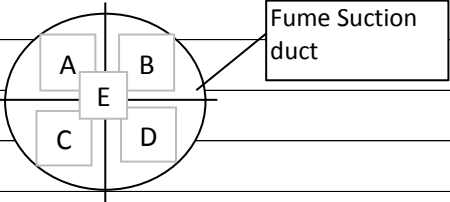
<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak		
remark _____					
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak		
remark _____					
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak		
remark _____					
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak		
remark _____					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak		
remark _____					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check; (normal average at &gt;, =10 m/s)</b>					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	11	11	11	11	10
Air velocity average (A+B+C+D+E)/5 = 10.8					



<b>Conclusion.</b>			
<input checked="" type="checkbox"/> no need follow up.		<input type="checkbox"/> need follow up.	
Item	Description	Follow up by	
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by Production Staff :	Approved by Assistant / E&M Manager :
Somchai	Nikon	NARUPON	NIKON
Date : 21-OCT-22	Date : 26-OCT-22	Date: 26-OCT-22	Date: 26-OCT-22

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><i>For Holding Furnace maintenance</i></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant		Casting			
Equipment		HFE		#1 <input checked="" type="checkbox"/>	#2 <input type="checkbox"/>
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable	remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid	<input type="checkbox"/> high		refill _____
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable	remark _____
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____

<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	11	11	10	10	10
Air velocity average $(A+B+C+D+E)/5 =$					10.4

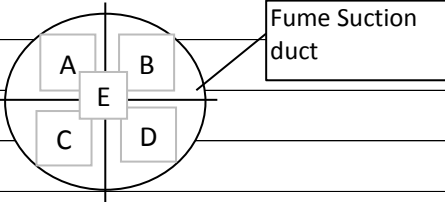


<b><u>Conclusion.</u></b>				
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.				
Item	Description	Follow up by		
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by Production Staff :	Approved by Assistant / E&M Manager :	
Somchai	Nikon	NARUPON	NIKON	
Date : 18-NOV-22	Date : 22-NOV-22	Date: 22-NOV-22	Date: 22-NOV-22	



Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><i>For Holding Furnace maintenance</i></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant		Casting			
Equipment		HFE		#1 <input checked="" type="checkbox"/>	#2 <input type="checkbox"/>
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable	remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid	<input type="checkbox"/> high		refill _____
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable	remark _____
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____

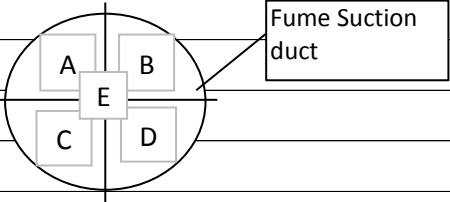
<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	10	11	10	10	10
Air velocity average $(A+B+C+D+E)/5 =$					10.2



<b><u>Conclusion.</u></b>				
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.				
Item	Description	Follow up by		
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by Production Staff :	Approved by Assistant / E&M Manager :	
Somchai	Nikon	NARUPON	NIKON	
Date : 20-DEC-22	Date : 21-DEC-22	Date: 21-DEC-22	Date: 21-DEC-22	

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><i>For Holding Furnace maintenance</i></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant		Casting			
Equipment		HFE	#1 <input type="checkbox"/>	#2 <input checked="" type="checkbox"/>	
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable	remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid	<input type="checkbox"/> high		refill _____
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable	remark _____
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____

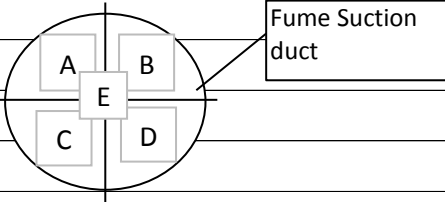
<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check;</b> (normal average at $\geq 10$ m/s)					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	10	11	10	10	10
Air velocity average $(A+B+C+D+E)/5 = 10.2$					



<b>Conclusion.</b>			
<input checked="" type="checkbox"/> no need follow up.		<input type="checkbox"/> need follow up.	
Item	Description	Follow up by	
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by Production Staff :	Approved by Assistant / E&M Manager :
Somchai	Nikon	NARUPON	NIKON
Date : 21-JUL-22	Date : 23-JUL-22	Date: 23-JUL-22	Date: 23-JUL-22

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <i>For Holding Furnace maintenance</i>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant		Casting			
Equipment		HFE	#1 <input type="checkbox"/>	#2 <input checked="" type="checkbox"/>	
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable	remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid	<input type="checkbox"/> high		refill _____
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable	remark _____
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____

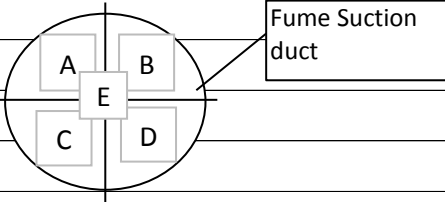
<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check; (normal average at &gt;=10 m/s)</b>					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	10	10	10	10	11
Air velocity average (A+B+C+D+E)/5 =					10.2



<b><u>Conclusion.</u></b>				
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.				
Item	Description	Follow up by		
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by	Approved by	
Somchai	Nikon	Production Staff :	Assistant / E&M Manager :	
		NARUPON	NIKON	
Date : 20-AUG-22	Date : 22-AUG-22	Date: 22-AUG-22	Date: 22-AUG-22	

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><i>For Holding Furnace maintenance</i></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant		Casting			
Equipment		HFE		#1 <input type="checkbox"/>	#2 <input checked="" type="checkbox"/>
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable	remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid	<input type="checkbox"/> high		refill _____
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable	remark _____
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____

<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____		
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____		
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____		
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____		
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____		
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check; (normal average at &gt;=10 m/s)</b>					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	10	10	10	10	10
Air velocity average (A+B+C+D+E)/5 = 10					

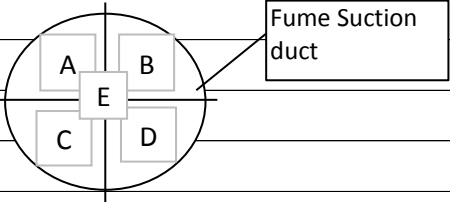


<b>Conclusion.</b>			
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.			
Item	Description	Follow up by	
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by	Approved by
Somchai	Nikon	Production Staff :	Assistant / E&M Manager :
		NARUPON	NIKON
Date : 21-sep-22	Date : 23-SEP-22	Date: 23-SEP-22	Date: 23-SEP-22



Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><i>For Holding Furnace maintenance</i></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant		Casting			
Equipment		HFE		#1 <input type="checkbox"/>	#2 <input checked="" type="checkbox"/>
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable	remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid	<input type="checkbox"/> high		refill _____
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable	remark _____
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____

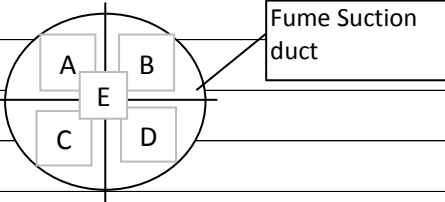
<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____		
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____		
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____		
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____		
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____		
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check; (normal average at &gt;,=10 m/s)</b>					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	11	10	11	11	10
Air velocity average (A+B+C+D+E)/5 =					10.6



<b><u>Conclusion.</u></b>				
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.				
Item	Description	Follow up by		
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by	Approved by	
Somchai	Nikon	Production Staff :	Assistant / E&M Manager :	
		NARUPON	NIKON	
Date : 21-OCT-22	Date : 26-OCT-22	Date: 26-OCT-22	Date: 26-OCT-22	

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><i>For Holding Furnace maintenance</i></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant		Casting			
Equipment		HFE		#1 <input type="checkbox"/>	#2 <input checked="" type="checkbox"/>
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable	remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid	<input type="checkbox"/> high		refill _____
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable	remark _____
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____

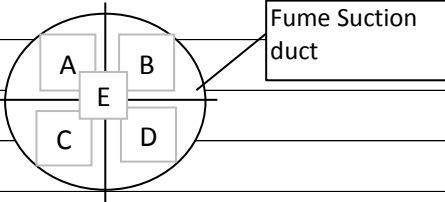
<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check; (normal average at &gt;=10 m/s)</b>					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	10	11	10	11	10
Air velocity average (A+B+C+D+E)/5 =					10.4



<b><u>Conclusion.</u></b>				
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.				
Item	Description	Follow up by		
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by	Approved by	
Somchai	Nikon	Production Staff :	Assistant / E&M Manager :	
		NARUPON	NIKON	
Date : 18-NOV-22	Date : 22-NOV-22	Date: 22-NOV-22	Date: 22-NOV-22	

Meyer Aluminium (Thailand)		E&M Department		<u>Mechanical</u> Section	
<b>Monthly maintenance check sheet</b> <b><i>For Holding Furnace maintenance</i></b>				E&M form No. Rev. <u>2</u> Sheet <u>1</u> of <u>2</u>	
Plant		Casting			
Equipment		HFE		#1 <input type="checkbox"/>	#2 <input checked="" type="checkbox"/>
<b>1 Combustion fan;</b>					
Air inlet filter cleaning					
<input checked="" type="checkbox"/> Clean		<input type="checkbox"/> not clean		remark _____	
Fan impeller visual for vibration and noise					
<input type="checkbox"/> vibration		<input type="checkbox"/> noise		<input checked="" type="checkbox"/> acceptable	remark _____
Flexible joint leak check					
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>2 Damper;</b>					
Wire rope sling function and damage check					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
Gear drive for damper control lube oil level check					
<input type="checkbox"/> low		<input checked="" type="checkbox"/> mid	<input type="checkbox"/> high		refill _____
<b>3 Charging door;</b>					
Check condition for door seal and clamp condition					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
All Steel block lining condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Wire rope sling condition check and paint grease.					
<input type="checkbox"/> damage		<input type="checkbox"/> changed		<input checked="" type="checkbox"/> acceptable	remark _____
<input type="checkbox"/> greasing		<input type="checkbox"/> cleaning		<input checked="" type="checkbox"/> acceptable	remark _____
<b>4 Male spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
<b>5 Female down spout;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____
Leak at _____		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> not leak	remark _____
Refractory condition check					
<input type="checkbox"/> damage		<input type="checkbox"/> repaired		<input checked="" type="checkbox"/> acceptable	remark _____

<b>6 Spout lid;</b>					
Air cylinder for door closing check leak and function					
<input type="checkbox"/> damage	<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> acceptable	remark _____		
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<b>7 Furnace tilting cylinder;</b>					
Hydraulic cylinder check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic cylinder turning point greasing for dowel pin and bush (EP0= 3 stroke)					
<input type="checkbox"/> greasing	<input type="checkbox"/> cleaning	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>8 Hydraulic main tank;</b>					
Hydraulic system check leak					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
Hydraulic pump visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
Hydraulic pump coupling visual check for vibration and noise.					
<input type="checkbox"/> vibration	<input type="checkbox"/> noise	<input checked="" type="checkbox"/> acceptable	remark _____		
<b>9 All furnace Gas pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>10 All furnace air pipe leak check and cleaning ;</b>					
Leak at _____		<input type="checkbox"/> repaired	<input checked="" type="checkbox"/> not leak	remark _____	
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>11 Furnace roof general cleaning;</b>					
<input checked="" type="checkbox"/> clean	<input type="checkbox"/> not clean	remark _____			
<b>12 Furnace door fume duct air velocity check; (normal average at &gt;=10 m/s)</b>					
Check at suction duct on fume hood.					
Position	A	B	C	D	E
Air velocity (m/s)	10	10	10	11	10
Air velocity average (A+B+C+D+E)/5 =					10.2



<b><u>Conclusion.</u></b>				
<input checked="" type="checkbox"/> no need follow up. <input type="checkbox"/> need follow up.				
Item	Description	Follow up by		
Done by E&M Technician:	Checked by E&M Engineer :	Acceptance by	Approved by	
Somchai	Nikon	Production Staff :	Assistant / E&M Manager :	
		NARUPON	NIKON	
Date : 20-DEC-22	Date : 21-DEC-22	Date: 21-DEC-22	Date: 21-DEC-22	