



# PTT GLOBAL CHEMICAL PUBLIC COMPANY LIMITED

## PIPING INSPECTION REPORT

Plant	: GCP	Report No. :	: 2022-2B-WW-60009-C7-N
Equipment Tag.	: 2B-WW-60009-C7-N	Type	: OSI Intrusive
Equipment Description	: PIPING	Reason For Inspection	: Inspection Plant
Inspector Name	: Pichet boonmee	Inspection Date	: 8-Jun-22

### 1. EQUIPMENT DATA

Design Pressure	: 5	Kg/cm <sup>2</sup> G	Operating Pressure	: 3.3	Kg/cm <sup>2</sup> G
Design Temperature	: 100.0	°C	Operating Temperature	: 40	°C
Design Code	: ASME B31.3		Year Service	: -	
Design Life	: -		Operation Fluid	: WASTE WATER	
Material Specification	: ASTM A106-B		Nominal Thickness	: -	
Corrosion Allowance	: -		MAWT	: -	
Insulation	: -		Degradation Mechanism	: -	

### 2. EXECUTIVE SUMMARY

#### External Visual Inspection:

N/A

#### NDT:

UTM was performed and the result of minimum thickness is 5.15 mm  
The shortest remaining life is 13.32 years at point 4 ELBOW position C

CORROSION RATE :	0.252	mm./Years	REMAINING LIFE:	13.320	Years	NEXT INSPECTION :	60	Month
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### 3. ACTION TAKEN

N/A

### 4. RECOMMENDATION

#### ACTION PARTY

N/A

T-II-IP1

### 5. REMARKS/COMMENTS

N/A

#### COMPLETED BY

#### INSPECTED BY


#### REVIEWED BY

#### APPROVED BY

SIGNATURE :

NAME :

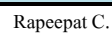
DATE :

  
(Mr.Pichet boonmee)

8 June 2022

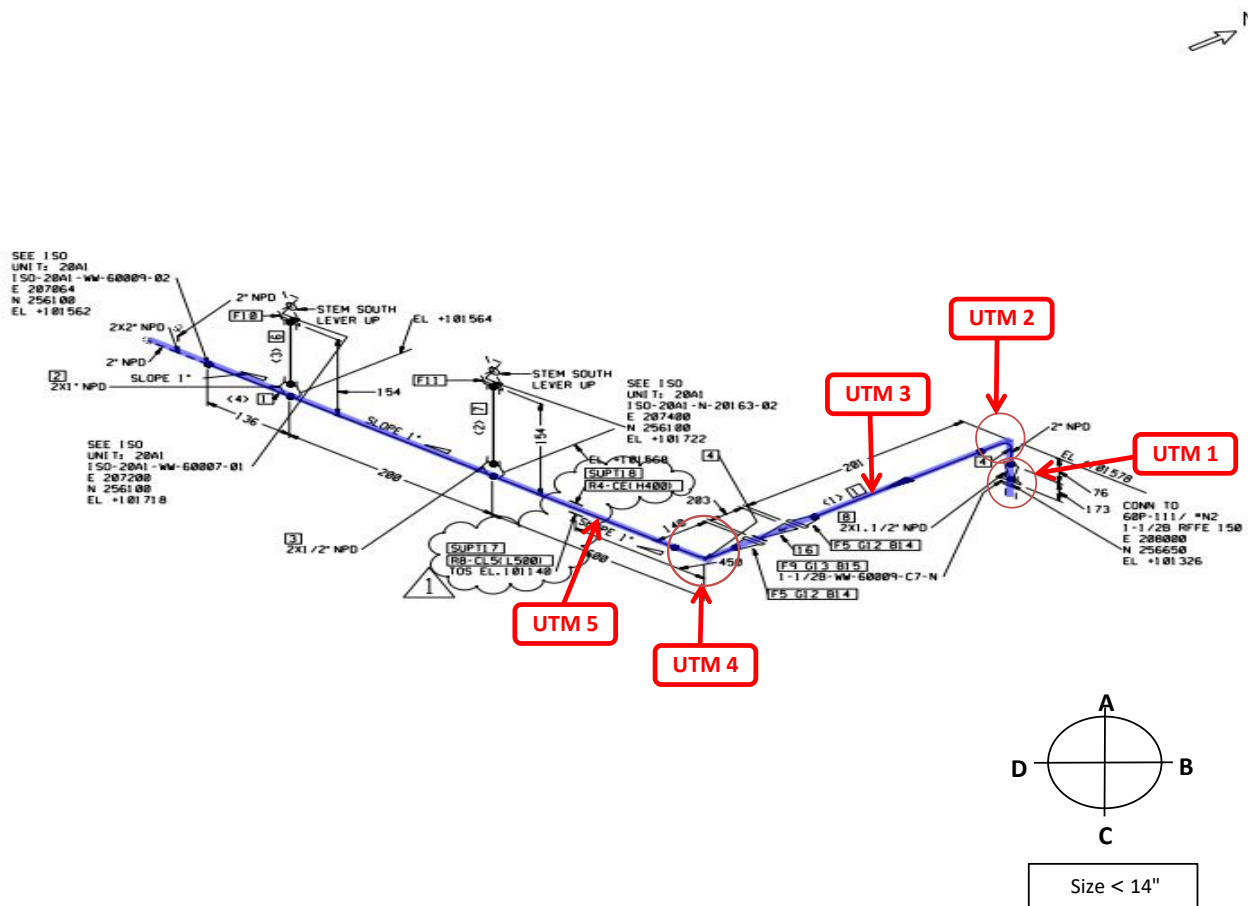
  
(Mr.Sinrapachai Thongngamdee)

10 June 2022

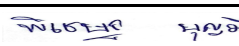

  
(Mr.Rapeepat Charoenmahanchai)

29 June 2022

Client. : GCP			Report No. : UTM-GCP-022-012		
Project Name. : -			Test Date. : 08-Jun-22		
Written Examination Procedure No. : -			Job No. : -		
Tag / Line No. : 2B-WW-60009-C7-N			Description. : PIPING		
Key Point Dwg. No. : 20A1-WW-60009-01			Corr. Circuit No. : -		
Material Spec. : ASTM A106-B			Fluid. : WASTE WATER		
Design Pressure. : 5.0 Kg/cm²			Design Temp. : 100 °C		Corrosion Allowance
Operate Pressure. : 3.3 Kg/cm²			Operate Temp. : 40 °C		-
Paint. : YES			Insulation. : NO		
Equipment		Probe		Others	
UT MFR. : OLYMPUS		Probe Model. : D790-SM		Couplant. : SONO 600	
Model. : 38DL PLUS		Frequency. : 5 MHz		Stepwedge. : Carbon Steel	
Techniques Scan. : A SCAN		Tip Dia. : 11 mm.		Calibration Range. : 2.50 - 12.50 mm.	
Series No. : 213717501		Series No. : 1237791		Sound Velocity : 5790/5920 m/s.	
Inspection Type. : <input checked="" type="checkbox"/> On-stream <input type="checkbox"/> SD-Internal <input type="checkbox"/> SD-External <input type="checkbox"/> Bare metal <input checked="" type="checkbox"/> Through paint					



### Remark

Completed By :	GCME Inspected	Review By	Approved By
Signature :			Rapeepat C.
Name :	(Mr.Pichet boonmee)	( Mr.Sinrapachai Thongnamdee )	(Mr.Rapeepat Charoenmahanchai)
Date :	8 June 2022	10 June 2022	29 June 2022



	Hafen-Museum Voss-Rohde, Bremen, No. 1 1947.10.10.00000.01	
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114

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Conf. Circuit No.



## Revision : 0

Tag / Line No. :

GCT

Unit :

Refer Master Key Point Dwg. No. :

28A1-WW-40009-01

Corr. Circuit No. :

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# PTT GLOBAL CHEMICAL PUBLIC COMPANY LIMITED

## PIPING INSPECTION REPORT

Plant	: GCP	Report No. :	: 2022-3B-WW-60030-C7-N
Equipment Tag.	: 3B-WW-60030-C7-N	Type	: OSI Intrusive
Equipment Description	: PIPING	Reason For Inspection	: Inspection Plant
Inspector Name	: Pichet boonmee	Inspection Date	: 8-Jun-22

### 1. EQUIPMENT DATA

Design Pressure	: 9.5	Kg/cm <sup>2</sup> G	Operating Pressure	: 7.6	Kg/cm <sup>2</sup> G
Design Temperature	: 100.0	°C	Operating Temperature	: 60	°C
Design Code	: ASME B31.3		Year Service	: -	
Design Life	: -		Operation Fluid	: WASTE WATER	
Material Specification	: ASTM A106-B		Nominal Thickness	: -	
Corrosion Allowance	: -		MAWT	: -	
Insulation	: -		Degradation Mechanism	: -	

### 2. EXECUTIVE SUMMARY

#### External Visual Inspection:

N/A

#### NDT:

UTM was performed and the result of minimum thickness is 5.23 mm  
The shortest remaining life is 19.26 years at point 1 PIPE position C

CORROSION RATE :	0.168	mm./Years	REMAINING LIFE:	19.260	Years	NEXT INSPECTION :	60	Month
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### 3. ACTION TAKEN

N/A

### 4. RECOMMENDATION

N/A

#### ACTION PARTY

T-II-IP1

### 5. REMARKS/COMMENTS

N/A

#### COMPLETED BY

#### INSPECTED BY


#### REVIEWED BY

#### APPROVED BY

SIGNATURE :

NAME :

DATE :

  
(Mr.Pichet boonmee)

8 June 2022

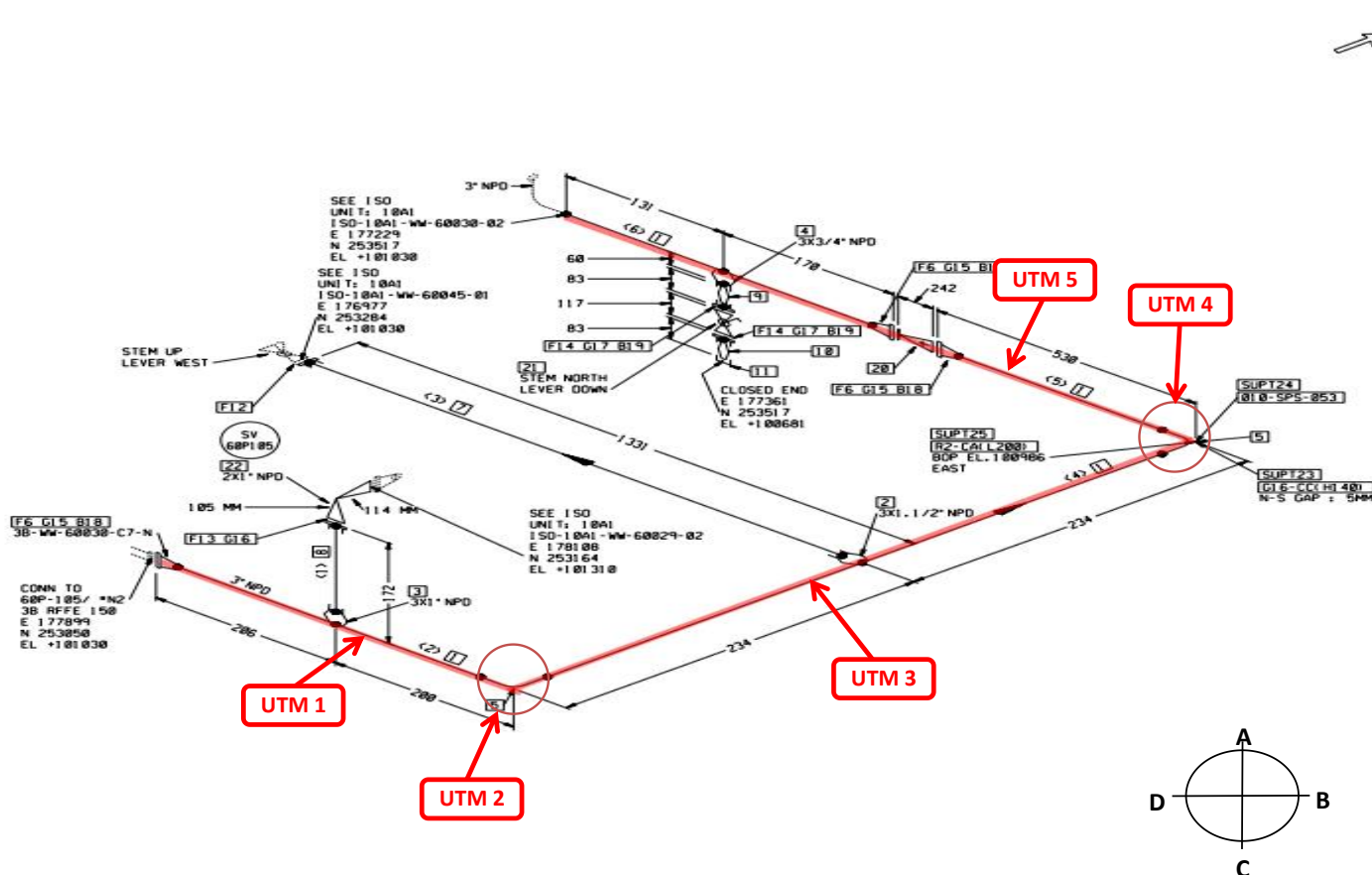
  
(Mr.Sinrapachai Thongngamdee)

10 June 2022



Rapeepat C.  
(Mr.Rapeepat Charoenmahanchai)

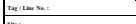
29 June 2022

Client. : GCP			Report No. : UTM-GCP-022-013			
Project Name. : -			Test Date. : 08-Jun-22			
Written Examination Procedure No. : -			Job No. : -			
Tag / Line No. : 3B-WW-60030-C7-N			Description. : PIPING			
Key Point Dwg. No. : 10A1-WW-60030-01			Corr. Circuit No. : -			
Material Spec. : ASTM A106-B			Fluid. : WASTE WATER			
Design Pressure. : 9.5		Kg/cm²	Design Temp. : 100		°C	Corrosion Allowance
Operate Pressure. : 7.6		Kg/cm²	Operate Temp. : 60		°C	-
Paint. : YES			Insulation. : NO			
Equipment		Probe		Others		
UT MFR. : OLYMPUS		Probe Model. : D790-SM		Couplant. : SONO 600		
Model. : 38DL PLUS		Frequency. : 5 MHz		Stepwedge. : Carbon Steel		
Techniques Scan. : A SCAN		Tip Dia. : 11 mm.		Calibration Range. : 2.50 - 12.50 mm.		
Series No. : 213717501		Series No. : 1237791		Sound Velocity : 5790/5920 m/s.		
Inspection Type. : <input checked="" type="checkbox"/> On-stream	<input type="checkbox"/> SD-Internal	<input type="checkbox"/> SD-External	<input type="checkbox"/> Bare metal	<input checked="" type="checkbox"/> Through paint		



### Remark

Completed By :	GCME Inspected	Review By	Approved By
Signature :			Rapeepat C.
Name :	(Mr.Pichet boonmee)	( Mr.Sinrapachai Thongnamdee )	(Mr.Rapeepat Charoenmahanchai)
Date :	8 June 2022	10 June 2022	29 June 2022



	Refer Master Key Point Dwg. No. :	18A1-BW-40070-01
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Project name							Dodge Pressure	Dodge Temp.	Operate Pressure	Operate Temp.	Fluid	Description	Material	Velocity	Paint	Insulation	UTM-GCP-022-013							
-							9.58	188	T-68	68	WASTE WATER	PIPING	ASTM A386-B	5786/9128	-	YES	NO							
Point	Position	Size	Pipe	SCH	Nom. (XXXX)	MAINT.	UT date (DD-MM-YYYY) 6-12-2021 wt(dmg.)	UT date (DD-MM-YYYY) 6-12-2021 wt(dmg.)	UT date (DD-MM-YYYY) 6-12-2021 wt(dmg.)	UT date (DD-MM-YYYY) 6-12-2021 wt(dmg.)	WT date (DD-MM-YYYY) 6-12-2021 wt(dmg.)	UT date (DD-MM-YYYY) 6-12-2021 wt(dmg.)	UT date (DD-MM-YYYY) 6-12-2021 wt(dmg.)	UT date (DD-MM-YYYY) 6-12-2021 wt(dmg.)	UT date (DD-MM-YYYY) 6-12-2021 wt(dmg.)	UT date (DD-MM-YYYY) 6-12-2021 wt(dmg.)	CA (mm)	LT-CR (mm/yr)	ST-CR (mm/yr)	LT-RL (years)	ST-RL (years)			
1	A	3"	PIPE	STD	5.49	2.0	5.41											3.41	0.052		66.098			
	B			STD	5.49	2.0	-																	
	C			STD	5.49	2.0	5.23												3.23	0.168		19.264		
	D			STD	5.49	2.0	-																	
	E			STD	5.49	2.0	5.38													3.38	0.071		47.648	
	F			STD	5.49	2.0	-																	
	G			STD	5.49	2.0	5.47													3.47	0.013		269.044	
	H			STD	5.49	2.0	-																	
2	A	3"	ELBOW	STD	5.49	2.0	6.21											4.21	No Corrosion		No Corrosion			
	B			STD	5.49	2.0	-																	
	C			STD	5.49	2.0	6.12												4.12	No Corrosion		No Corrosion		
	D			STD	5.49	2.0	-																	
	E			STD	5.49	2.0	6.42													4.42	No Corrosion		No Corrosion	
	F			STD	5.49	2.0	-																	
	G			STD	5.49	2.0	6.57													4.57	No Corrosion		No Corrosion	
	H			STD	5.49	2.0	-																	
2.2.	A	3"	ELBOW	STD	5.49	2.0	6.32											4.32	No Corrosion		No Corrosion			
	B			STD	5.49	2.0	-																	
	C			STD	5.49	2.0	6.32													4.32	No Corrosion		No Corrosion	
	D			STD	5.49	2.0	-																	
	E			STD	5.49	2.0	6.57													4.57	No Corrosion		No Corrosion	
	F			STD	5.49	2.0	-																	
	G			STD	5.49	2.0	6.61													4.61	No Corrosion		No Corrosion	
	H			STD	5.49	2.0	-																	
2.3.	A	3"	ELBOW	STD	5.49	2.0	6.21											4.21	No Corrosion		No Corrosion			
	B			STD	5.49	2.0	-																	
	C			STD	5.49	2.0	5.99													3.99	No Corrosion		No Corrosion	
	D			STD	5.49	2.0	-																	
	E			STD	5.49	2.0	6.11													4.11	No Corrosion		No Corrosion	
	F			STD	5.49	2.0	-																	
	G			STD	5.49	2.0	6.41													4.41	No Corrosion		No Corrosion	
	H			STD	5.49	2.0	-																	
3	A	3"	PIPE	STD	5.49	2.0	5.62											3.62	No Corrosion		No Corrosion			
	B			STD	5.49	2.0	-																	
	C			STD	5.49	2.0	5.36													3.36	0.084		40.079	
	D			STD	5.49	2.0	-																	
	E			STD	5.49	2.0	5.44													3.44	0.032		106.687	
	F			STD	5.49	2.0	-																	
	G			STD	5.49	2.0	5.61													3.61	No Corrosion		No Corrosion	
	H			STD	5.49	2.0	-																	
4	A	3"	ELBOW	STD	5.49	2.0	6.10											4.10	No Corrosion		No Corrosion			
	B			STD	5.49	2.0	-																	
	C			STD	5.49	2.0	6.20													4.20	No Corrosion		No Corrosion	
	D			STD	5.49	2.0	-																	
	E			STD	5.49	2.0	6.10													4.10	No Corrosion		No Corrosion	
	F			STD	5.49	2.0	-																	
	G			STD	5.49	2.0	6.06													4.06	No Corrosion		No Corrosion	
	H			STD	5.49	2.0	-																	
4.2.	A	3"	ELBOW	STD	5.49	2.0	6.05											4.05	No Corrosion		No Corrosion			
	B			STD	5.49	2.0	-																	
	C			STD	5.49	2.0	6.44													4.44	No Corrosion		No Corrosion	
	D			STD	5.49	2.0	-																	
	E			STD	5.49	2.0	6.15													4.15	No Corrosion		No Corrosion	
	F			STD	5.49	2.0	-																	
	G			STD	5.49	2.0	6.36													4.36	No Corrosion		No Corrosion	
	H			STD	5.49	2.0	-																	
4.3.	A	3"	ELBOW	STD	5.49	2.0	6.10											4.10	No Corrosion		No Corrosion			
	B			STD	5.49	2.0	-																	
	C			STD	5.49	2.0	6.14													4.14	No Corrosion		No Corrosion	
	D			STD	5.49	2.0	-																	
	E			STD	5.49	2.0	6.47													4.47	No Corrosion		No Corrosion	
	F			STD	5.49	2.0	-																	
	G			STD	5.49	2.0	6.40													4.40	No Corrosion		No Corrosion	
	H			STD	5.49	2.0	-																	
5	A	3"	PIPE	STD	5.49	2.0	5.45											3.45	0.026		133.747			
	B			STD	5.49	2.0	-																	
	C			STD	5.49	2.0	5.50													3.50	No Corrosion		No Corrosion	
	D			STD	5.49	2.0	-																	
	E			STD	5.49	2.0	5.47													3.47	0.013		269.044	
	F			STD	5.49	2.0	-																	
	G			STD	5.49	2.0	5.31													3.31	0.116		28.515	
	H			STD	5.49	2.0	-																	
Inspector by							Pichet B.																	
							8 June 2022																	
Review by							Sinupachai T.																	
							29 June 2022																	



# PTT GLOBAL CHEMICAL PUBLIC COMPANY LIMITED

## PIPING INSPECTION REPORT

Plant	: GCP	Report No. :	: 2022-3B-WW-61038-C7-N
Equipment Tag.	: 3B-WW-61038-C7-N	Type	: OSI Intrusive
Equipment Description	: PIPING	Reason For Inspection	: Inspection Plant
Inspector Name	: Pichet boonmee	Inspection Date	: 8-Jun-22

### 1. EQUIPMENT DATA

Design Pressure	: 9.5	Kg/cm <sup>2</sup> G	Operating Pressure	: 7.6	Kg/cm <sup>2</sup> G
Design Temperature	: 100.0	°C	Operating Temperature	: 60	°C
Design Code	: ASME B31.3		Year Service	: -	
Design Life	: -		Operation Fluid	: WASTE WATER	
Material Specification	: ASTM A106-B		Nominal Thickness	: -	
Corrosion Allowance	: -		MAWT	: -	
Insulation	: -		Degradation Mechanism	: -	

### 2. EXECUTIVE SUMMARY

#### External Visual Inspection:

N/A

#### NDT:

UTM was performed and the result of minimum thickness is 5.16 mm  
The shortest remaining life is 14.84 years at point 1 PIPE position G

CORROSION RATE :	0.213	mm./Years	REMAINING LIFE:	14.840	Years	NEXT INSPECTION :	60	Month
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### 3. ACTION TAKEN

N/A

### 4. RECOMMENDATION

#### ACTION PARTY

N/A

T-II-IP1

### 5. REMARKS/COMMENTS

N/A

#### COMPLETED BY

#### INSPECTED BY


#### REVIEWED BY

#### APPROVED BY

SIGNATURE :

NAME :

DATE :

  
(Mr.Pichet boonmee)

8 June 2022

  
(Mr.Sinrapachai Thongngamdee)

10 June 2022

Rapeepat C.  
(Mr.Rapeepat Charoenmahanchai)

29 June 2022







## Revision : 0

Tag / Line No. :

GCT

Unit :

Refer Master Key Point Dwg. No. :

68A2-WW-61078-01

Corr. Circuit No. :

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