

12" Tee Strengthening

Petronas Penapisan Melaka – Dec 2017

Medium	HC
Diameter	12" tee and 6" straight pipe
Temperature	145°C
Pressure	15.1 bar
Types of defect	Thinning

Challenges:

- Live repair at high temperature 121 degC



Before



After

30" Pipe Leak Repair

Petronas Penapisan Terengganu – Aug 2017

Medium	HC, Benzene and Toluene
Diameter	30 inch
Temperature	163°C
Pressure	1.2 bar
Types of defect	Leak (wrap over clamp)
Repair Length	1 meter

Challenges:

- Live repair at 163°C



Before



After

2" LPG Piping Corrosion Protection

iowrapTM

formerly known as ProWrapTM

Petronas Penapisan Melaka – Aug 2017

Medium	LPG
Diameter	2 inch & 1 inch
Temperature	90°C
Pressure	8 bar
Types of defect	Severe corrosion & external metal loss
Repair Length	80 meter

Challenges:

- Restricted working area and elevated
- Live repair at 90°C



Before



After

1.5" LPG Piping Strengthening

iowrapTM

formerly known as ProWrapTM

Petronas Penapisan Melaka – Aug 2017

Medium	HP Condensate
Diameter	1.5 inch
Temperature	188°C
Pressure	10 bar
Types of defect	Severe corrosion & external metal loss
Repair Length	0.5 meter x 5 spools

Challenges:

- Live repair at 188°C



Before



After

3" Elbow Leak Repair

POWERTEK – Dec 2017

Medium	Fire Water
Diameter	3 inch (Elbow)
Temperature	Ambient
Pressure	5 bar
Types of defect	Leak repair

Challenges:

- Live repair at 5 bar



Before



After

Strengthening Repair on ¾” & 1” Pipe

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PP(M)SB – Jan 2018

Medium	Liquefied Petroleum Gas
Description	Straight pipe
Diameter	¾ & 1 inch
Temperature	160 °C
Pressure	0.2 bar
Types of defect	Internal metal loss and wall thinning
Repair Length	0.9 meter

Challenges:

- Wrapping on high temperature pipe (above 100°C).
- Space constraint.



Before



After

Strengthening Repair on ¾" & 1" Pipe

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PP(M)SB – Jan 2018

Medium	Crude/condensate
Description	Straight pipe
Diameter	¾ & 1 inch
Temperature	160 °C
Pressure	6.5 bar
Types of defect	Internal metal loss and wall thinning
Repair Length	0.9 meter

Challenges:

- Wrapping on high temperature pipe (above 100°C).
- Space constraint.



Before



After

V-140 A Flare KO Drum

PCSB PMA Duyong- May 2018

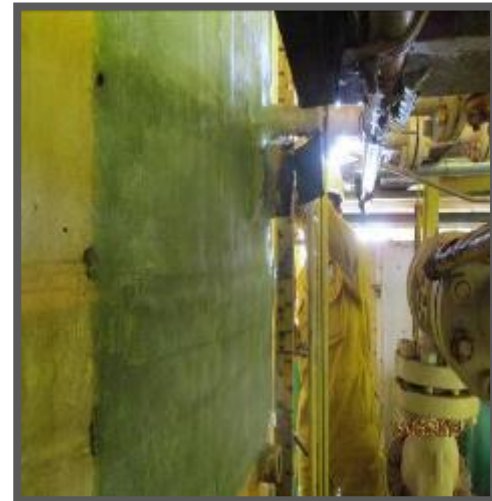
Medium	Flare
Description	Knock Out Drum
Temperature	33°C
Diameter	96 inch
Pressure	0.7 bar
Types of defect	Wall Thinning
Repair Length	1 m2

Challenges:

- High temperature surrounding.
- Space constraint.



Before



After

Leak Repair on 3" Close Drain Hydrocarbon

iowrapTM

formerly known as ProWrapTM

PCSB-PMA Dulang – June 2018

Medium	Hydrocarbon
Description	Straight pipe
Diameter	3 inch
Temperature	200°C
Pressure	3.5 bar
Types of defect	External metal loss and wall thinning
Repair Length	0.8 meter

Challenges:

- Space constraint.



Before



After

18" V-890 SOT Launcher

PCSB-PMA Bekok C – June 2018

Medium	Hydrocarbon
Description	Tee
Diameter	18 inch
Temperature	65°C
Pressure	107 bar
Types of defect	External metal loss and wall thinning
Repair Length	0.7 meter

Challenges:

- Space constraint.
- High temperature surrounding.



Before



After