



# Sea Horse Services Sdn Bhd

## KON-TAC<sup>®</sup> *Protect Your Assets!*

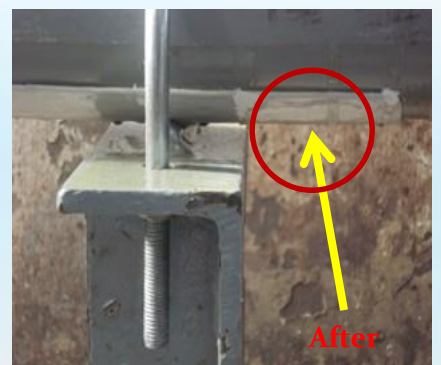
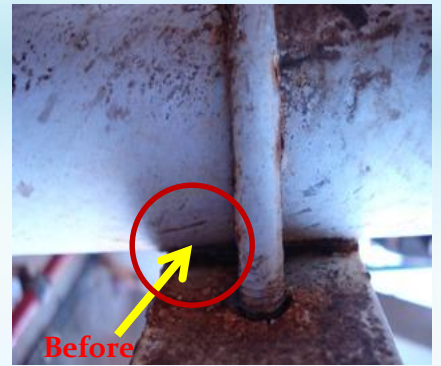
Corrosion and deterioration cause many challenges to different types of industries operating under severe outdoor weather conditions.

Industries operating in marine, oil and gas industrial environments, especially located under direct and prolonged exposure to sunlight, rain and saline mildew contributes to extreme corrosion leading to serious consequences. The economic losses of such corrosion and deterioration not only includes cost of replacement but also loss in revenue and penalties due to down time during shut downs.



The areas most susceptible to such corrosion are along pipe supports especially if the supports or pipes are made of metal.

These costly shortcomings and indemnities can be avoided if the pipelines were protected from corrosion with a non-metallic isolator – to isolate the metal and metal contact point

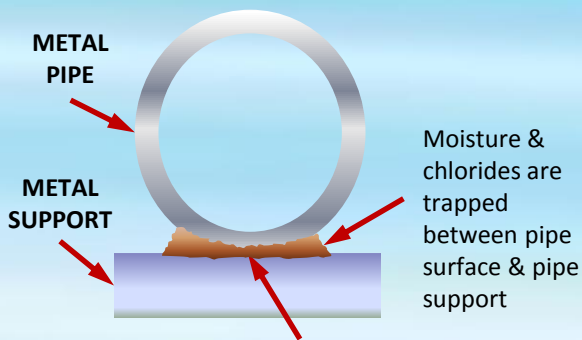


# Yes, we have the solution!



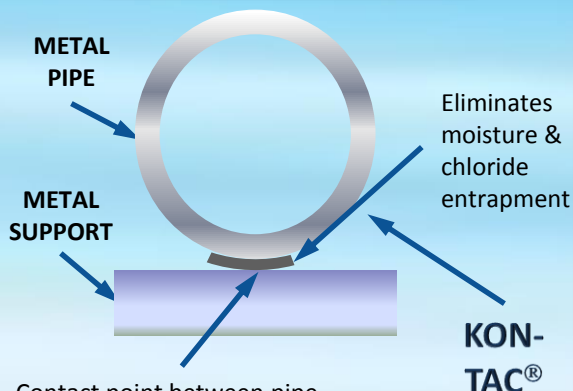
KON-TAC® acts as a non-metallic corrosion isolator by creating a barrier between pipe and its support structure. KON-TAC® sleeves are available in 1 inch to 24 inches according to pipe's outer circumference, which form a semi-round segment or can be tailored to Client's requirements.

## CURRENT PROBLEM



For old pipes, metal loss happened due to abrasion, corrosion & coating failure. This can lead to pipe leakage if prolonged without any preventive measure. Hence, prior to KON-TAC installation, the pipe will be lifted up and repair the pitted areas with our paint, Aqua Sealer.

## OUR SOLUTION



Contact point between pipe surface & pipe support has been isolated.

## Product Information

At Sea Horse Services Sdn. Bhd., KON-TAC are made from high quality composite materials such as Fibre Reinforced Polymer (FRP) or Kevlar and build up with excellent adhesive agent.

FRP are used for KON-TAC with diameter 1 inch to 6 inches, as the Kevlar are used for diameter 8 inches and above.

Size (inch)	Length (mm)	Arc (mm)	Thickness (mm)	Material
1	203	21	4	FRP
1.5	203	30	4	FRP
2	203	38	4	FRP
2.5	203	46	4	FRP
3	203	56	4	FRP
4	203	72	4	FRP
5	203	89	4	FRP
6	203	106	4	FRP
8	203	115	4	Kevlar
10	203	143	4	Kevlar
12	203	170	4	Kevlar
14	203	186	4	Kevlar
16	203	213	4	Kevlar
18	203	239	4	Kevlar
20	203	266	4	Kevlar

## SPECIFICATIONS

		FRP	Kevlar
<b>Linear Thermal Expansion</b>	ASTM E 831	$2.17 \times 10^{-4}$ mm/mm/°C	$2.79 \times 10^{-4}$ mm/mm/°C
<b>Tensile Strength</b>	ASTM D 3039	4,258 lbf/in <sup>2</sup>	11,667 lbf/in <sup>2</sup>
<b>Elongation at Break</b>	ASTM D 3039	0.8%	1%
<b>Abrasion Tests</b>			
<b>Resistance to Organic Coatings to the effects of Rapid Deformation (Impact), Kilogram – meter at maximum impact height of the end point</b>		65cm at load of 911g (2lbs) (no failure to the coating)	ASTM D2794-04
<b>Abrasion Resistance of Organic Coatings by Taber Abraser</b>		Weight Loss = 0.022g Wear Index = 22 (22mg/1000 revolution /1kg)	ASTM D4060-01
<b>Scrub Resistance of Paints by Abrasion Weight Loss</b>		Weight Loss = 1g Wear Index = 2.87	ASTM D4213-96e1 (modified)
No. of Scrub Cycles = 1,441,613 cycles Abrasion Load = 4,135kg			

### Load Test

<b>Compression load for FRP Material</b>	<b>16,976 lbf</b>
<b>Compression load for Kevlar material</b>	<b>22,301 lbf</b>

### Shear Test

<b>Compression shear load test to Kon-Tac</b>	<b>11,079 lbf</b>
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## APPLICATION METHOD

After lifting, sanding /  
wire-brush for surface  
preparation

Secure with cable tight for  
24 hours curing process

Identify the badly  
corroded pipes

Application of special  
adhesive agent onto the  
pipe and KON-TAC

## SIRIM Tests

### PRESSURE LOAD TEST



### SHEAR TEST

