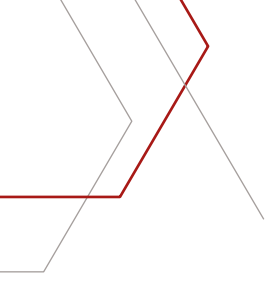


# CASE STUDY

Carbontech Case study 028  
24" with 2" Tee Gas line repair – 93 barg





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## PROJECT DETAILS

	Case Study Number CTCS:028	Design Pressure 93 Bar	
	Repair Summary 24" Gas line	Operating Pressure 22 BAR	
	Client Gas Pipeline Middle East	Design Temperature 82°C	
	Service Type Gas	Operating Temperature 60°C	
	Line Size 24"	Base Material Carbon steel	
	Line Class 900#		



#### ANOMALY DESCRIPTION

Due to pipe coating failure, severe external corrosion was identified on a 24" main gas line with a 2" Tee.

*Fig 1: External Pitting*



*Fig 2: Overview of Repair area*



#### INTEGRITY CONCERNS

Continued and unmitigated corrosion will result in the pipe to weaken around the corroded area. This will result in the pipe losing its structural integrity and may cause sudden failure of the pipe. Furthermore, leaking process could result in major fire, environmental hazards and loss of production with significant ramifications to power supply.



## THE CARBONTECH SOLUTION

The surrounding and failed PPE coating was removed, and the pipe was cleaned to a SA2.5 bare metal finish. The area was then primed using RW110 primer solution prior to the application of the Revowrap RW110 carbon composite system.

Surface Preparation achieved: SA2.5

Product used: Revowrap 110

Engineering calculations: ISO-24817

Layers used: 24 layers

Post cured: Not Required - Ambient cure system

Fig 3: Illustration of Repair plan

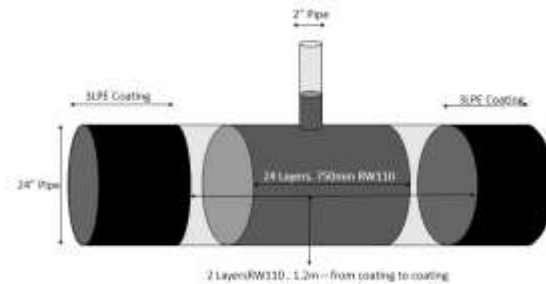


Fig 4: Completed wrap



Fig 5: Completed wrap close up



### CONCLUSION

The composite repair system designed by Carbontech satisfying the ISO TS 24817 standard was successfully installed.

As a non-through-wall defect repair, the laminate wrap provides structural integrity to the pipe in accordance with the required design specifications that will prevent continued external corrosion for the remainder of the required 20-year design lifetime without the risk of losing production



## CARBONTECH

The place chemistry, engineering and global expertise are brought together to drive progressive innovation in advanced composite technologies for the emergency repair of critical assets "There is nothing generic about us" we don't just sell pipe wraps; we provide accurate engineering backing to deliver tailored solutions

Sound and responsible engineering is the basis on which we build our company, products and services. It is the core to our success and it is the foundation on which we have engineered and manufactured our innovative and bespoke products

We strive by a zero-failure philosophy and warrant our engineered composite solutions are tested, proven and validated. We vow to provide dependable, responsible and accurate information regarding the capabilities of our systems

[www.revowrap.com](http://www.revowrap.com)

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PROGRESSIVE COMPOSITE ENGINEERING

