Improve Piping Failure Causes and Prevention

Rayong Engineering and Plant Service Co., Ltd | (REPCO)

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With more than 10 years of petrochemical plant services, Rayong Engineering and Plant Service (REPCO) has delivered its skill and expertise in providing practical solutions for *Piping Failures* in the petrochemical industry. We provide solution-independent project delivery, engineering and consulting services. Most of the solutions provided are advanced in worldwide technique, insight solution, practical, and cost-optimization. The solutions have been proven at the petrochemical to real operating conditions. Our team consists of experienced practitioners and skilled specialist in knowledge.



What Is Piping Failure?

The piping failure is a system breaks down. In the context of piping – it could mean the mechanisms is faulty such as *fatigue, rupture, brittle and creep.* In addition, *overload, corrosion and leakage failures* were the number of occurrence in the failure of

petrochemical industry. The failure may occur from the mistakes during design, construction, operation, maintenance and inspection. The piping failures could potentially lead to plant shut down, loss opportunities of production and business impact.

REPCO Advantages

REPCO has unique experience and skills in improving piping failure including ASSESSMENT, TROUBLESHOOTING and PREVENTION

> We can provide with the **FASTEST SERVICE WITH HIGH QUALITY.** Save lost of profit and opportunity to the customer

We can provide THE MOST COMPREHENSIVE SERVICE offering in the industry

Our Services

- Piping Failures and Risk Assessments
- Piping Failures Analysis
- Technical Consultant
- Identify the Root Causes of Piping Failures
- Piping Failure Prevention
- · Recommend Methods to Correct Future Similar Failures
- Manpower Supply for Review the Results
- Cost/Benefit Analysis

Benefits

Avoiding piping failures has many benefits to employees, operations staff, shareholders, and society as a whole. Such benefits include:

- Improved integrity and safety Zero VOCs, significant reduction in piping failures (a major HS&E concern), compliance with international code, guidelines, and other process safety requirements
- Increase efficiency Long run service, reduced environmental risk, overall reduced operating risk
- Lower capital costs Through fit-for-purpose design recommendations; less conservative engineering, less re-work, and elimination of redundant activities



(Source: World Academy of Science, Engineering and Technology International Journal of Civil and Environmental Engineering)

Piping Failure Overview

Design Review

- Background investigation of piping failure
- Quantitative risk assessments of piping failure

MDIC

CENTER OF TECHNOLOGY

- Detail Analysis
- · Overall visual inspection and evidence collection
- · Identify the root causes of piping failures
- Find the best solution to prevent piping failure
 Cost/Benefit Analysis
- Recommendation for the future
- FEA Analysis
- · Analysis with the comprehensive method

The Analysis Tools

Finite Element Analysis Software(**FEA**) is the latest analytical software for pipe stress analysis and piping failure



Capabilities Tools:

- Stress Analysis
- Improve accuracy of designs and analyses
- Calculate more realistic loading Conditions
- Analyze components outside of code Limits

CONTACT US

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