Case History
Replacing Corroded and Failed Steel Pipe with Corrosion Resistant FRP Pipe
Case History

TVA Cumberland
Coal Fired Electric Generating Plant
2500 MW Plant in service 1973
Alstom FGD System Installed 1995
60 x 36” Absorber External Recycle Lines
Rubber Lined Carbon Steel Pipe
REINFORCED PLASTIC SYSTEMS

Absorber Recycle Pipe
RPS Scope

Stress Analysis of New FRP in Existing RLCS Lay Out
Design and Supply of New Supports
Design and Supply of Auxiliary Steel
Manufacture of Pipe and Fittings
Shop Fabrication of Pipe Spools
Quality Assurance Oversight of TVA’s Installation Contractor
Corroded Rubber Lined Steel Pipe
Pipe Stress Analysis

Caesar Stress Analysis Software

Stress Analysis Information

Pipe & Fitting Properties
- Thickness
- Axial, Hoop, & Shear Modulus
- Caesar Poisson Ratio
- CTEs
- SIFs and k factors

Allowable Stresses

Code Stress Recommendations
Caesar Pipe Stress Model
Finite Element Analysis
Cosmos Software
Pipe Supports
Replacement Pipe
On Site Spool Fabrication
Installed RPS Pipe
Your Choice: Corrosion Free or Full of Corrosion