



An overview

Piping – Materials & Specifications

By KKR BDS

INDEX



- Diversity of Projects Handled
- Roles and responsibilities
- Knowing the TEAM

DIVERSITY OF PROJECTS HANDLED



- Petroleum
- Petrochemicals
- Oil & Gas process industries
- Chemical
- Pharmaceutical
- Fertilizers
- FMCG industries
- Bio Pharmaceutical

ROLES AND RESPONSIBILITIES



- Piping Material Specification
- Valve Material Specification
- Calculation of Pipe Wall Thickness as per ASME B31.3
- Vacuum calculation for external pressure as per UG 28-30
- R-pad & Miter bend calculations
- Hydro test pressure calculations
- Preparation and maintaining Specialty item list
- Datasheet of Specialty items
- Material Requisitions of piping as well as specialty items

ROLES AND RESPONSIBILITIES



- Material Take off(MTO) and inputs to Material Management software
- Technical Bid Evaluation
- Purchase Requisitions
- Vendor drawing review of piping as well as specialty items
- Maintaining and updating Line List on Plant Data Manager(PDM)
- Specification for insulation thickness
- Project man-hours and cost estimation

PIPING MATERIAL SPECIFICATION



- Review of PFDs for basic estimation of creating pipe classes.
- Review of MSGs & MSDs and selecting appropriate corrosion allowance.
- Selecting basic Material of Construction(MOC) for pipes, flanges, fittings & valves based on fluid service.
- Generating pipe class index.
- Documentation & further revisions based on piping design requirements.

VALVE MATERIAL SPECIFICATION



- Categorizing valves according to type, end connection, gear operations & governing standards.
- Selection of trim number from trim table as per API 600.
- MOC for different valve parts based on standards & past project experience.
- Generating valve material index.
- Documentation & further revisions based on piping design requirements.

CALCULATIONS



- Pipe wall thickness calculation
- Vacuum (external pressure) calculation
- R-pad calculations
- Miter bend calculations
- Insulation thickness calculation
- Hydro test pressure calculation

SPECIALTY ITEMS



- Maintaining a log of piping Specialty items.
- P&ID mark ups.
- Checking line conditions.
- Recommending desired MOC.
- Preparation of technical datasheets (Strainers, Steam traps, Air trap, Moisture trap, Steam / condensate manifold, Hose & Hose couplings, Sampling systems, Sample cooler, Special valves, Flame arrestor, Sight glass, Safety shower and eye wash, etc.)
- Documentation & further revisions based on piping design requirements.

REQUISITIONS & EVALUATION



- MRs of all piping bulks items, valves and specialty items.
- Technical Evaluation of vendor offers.
- Vendor meeting & resolving issues with respect to offers.
- Technical Bid Evaluation.
- Preparation of PRs.
- Vendor Drawing Review of Piping as well as Specialty Items.

VALUES



- Integrity
- Adeptness
- Quality of work
- Timely delivery

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Thank You

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