# Substitution control matrix

MANIK TRADING technical reference table

| Question | Evidence required | Decision |
|---|---|---|
| Is welded A53 permitted? | Datasheet and purchase specification | No when seamless manufacture is required |
| Is zinc coating required? | Environment and purchase order | Galvanized A53 can be a separate requirement |
| Is service at elevated temperature? | Design code and allowable stress | The A106 title does not replace design analysis |
| Is the MTC sufficient? | Heat, type, grade, dimensions and tests | All attributes must be traceable |
| Is substitution acceptable? | Documented engineering approval | Only after clause-by-clause reconciliation |

ASTM source / basis: ASTM International — ASTM A106/A106M-26; ASTM A53/A53M-24.