



TUBE EXPANSION USING TAGUCHI TECHNIQUES

WHAT?

Process of eliminating differences in pipes' diameter adjoined through welding.

WHY?

1. Reduce stresses from tube contraction/expansion.
2. Avoid misalignment.
3. Prevention of stress corrosion.

"Cost is more important than quality, but Quality is the best way to reduce cost"

Genichi Taguchi

Taguchi, an Engineer & Statistician

PARAMETER FROM TUBE EXPANSION TECHNIQUES

1. Ratio of Extension
2. Co-efficient of friction.
3. Angle (Mandrel).
4. Gauge/Thickness.
5. Material composition.
6. Friction coefficient
7. Extension Ration

Taguchi methods involves the structured process that includes objectifying the standard objects in a more measurable and specific manner with the particular target of measuring the performance of operation either set at maximum or minimum values, identifying the process parameters based on variables that have potential of affecting the process.

NUMERICAL MODELLING

This F.E.M simulation verifies the feasibility of the model and its calculations' accuracy in explaining the various obtained conditions based on deviations from the simulation and those from analytical results

RESULTS

