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CORROSION RESISTANT MATERIALS AND SOLUTIONS

# To Bolt or Not to Bolt

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A presentation based on many years of hands-on experience and on the properties of stainless steel where we consider:

- the benefits
- constraints
- cost considerations

for bolting or welding as methods of tank construction.

**This presentation is drawn from over 70 years of NDE company experience and relationships with local and international suppliers including Outokumpu**

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## Advantages of Bolted vs Welded Tanks

### Bolted Tanks

- If tank is pre-fabricated in a shop, the time of site fabrication is reduced resulting in significantly lowered costs
- Less skilled labour required
- Cost of crantage, particularly in remote areas, has become exorbitant
- Climatic conditions can make site-welding difficult
- Safety regulations in certain countries mean that welders may not be allowed inside the tank (even though the tank may be fifty meters in diameter)

### Welded Tanks

- No crevices on stainless steel, minimising the very significant risk of crevice corrosion
- Less damage likely during transport

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It is critical to consider the corrosion characteristics of the materials of construction when accepting alternate methods of tank manufacture.

Failure to do so can result in very costly corrosion problems, not only in the long term but in the short and medium term as well.

A combination of bolting and welding/sealing can supply the solution but will depend on a full evaluation and costing of materials and methods of construction for the particular site and process.

[www.nde.co.za](http://www.nde.co.za)

The logo for NDE (Non-Destructive Examination) is displayed in a stylized, outlined font. The letters 'N', 'D', and 'E' are interconnected, with the 'D' having a unique shape. The logo is positioned in the lower center of the page, above a horizontal line.

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