

Safety and health alert

13/07 Concealed manufacturing defects in pipe fittings and flanges procured from overseas

Incident

Stainless steel bore flanges and fittings procured from overseas for a major multi-million dollar project were rejected because of manufacturing defects and visible cracks. Metallurgical investigation revealed that forging defects caused cracking. Moreover, investigation revealed that welding concealed the cracks.

Tests also revealed that some fittings had unacceptable welding defects and additional welds that were approved by the notified body. The majority of the fittings appeared to have additional welds, as if they were assembled from pieces, although the product certificates did not mention additional welds.

The above incident highlights issues concerning the procurement process, quality assurance and the policy to rely on the quality assurance (QA) system of manufacturers and suppliers.

Factors to consider

- Cracking was a consequence of forging defects.
- Welding was used to conceal the defects.
- The notified body approved the welds although some welds were defective.
- The product certificates did not identify the additional welds.
- Reliance on the quality assurance system of the manufacturer and supplier.

Recommendations

1. Persons choosing to procure plant from any unproven source must ensure that the items are designed and manufactured under strict quality assurance.
2. Plant is inspected and/or tested to ensure that it is fit for purpose and safe for use.
3. Product certificates accompanying plant should be checked for accuracy and authenticity.
4. Persons who procure plant should not rely solely on the quality assurance system of the manufacturer and supplier.

Further information

For further information on this summary please contact an Inspector in the Plant & Engineering Team on 1300 307 877 or access the WorkSafe website at www.docep.wa.gov.au.

