

Pressure Vessel Failure during Hydrotest-Nov. 2007 in China

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Folks,

Please find attached photos of a pressure vessel that recently failed whilst under hydrotest during post fabrication testing. This vessel was manufactured by a vessel vendor in China and the plate was of Chinese mill origin. Unfortunately this is another example of serious equipment/material failures with equipment being sourced out of the rapidly developing economies such as China, Eastern Bloc and others. These examples are becoming almost a weekly occurrence now and are exhibiting failure modes not seen in the mature manufacturing economies since the 1930's. Again we need to ensure vigilance in the acceptance of manufacturers and once more I stress the need to know where the base materials are sourced from.

Apparently this pressure vessel had reached fifty percent of the required test pressure when the shell ruptured. A metallurgical failure report is not available however from the photographs a number of observations could be made regarding the quality of the material and the welding.

Lesson learned

- (1) All base metal requirements shall be specified in P.O Requisition per project/Industry Code requirements.
- (2) Consult specialists (i.e., Materials and Corrosion Engineers) whenever you doubt.
- (3) All inspection (from base materials to final products) should be performed per the codes, specs & standards.
- (4) Especially when you selected the manufacturers in China, the above (1), (2) & (3) will be a very important message.











