Effect of restrained hot spots and integrity of steel welded joints

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Abstract
The need for quality control is paramount especially when new technologies are used with sourced labor as to minimize construction costs. The cost of quality control amount more than 10% of the total construction project cost and assures the client of getting a product of controlled quality. In structures joined by welding processes, a change in welding, transportation or operating procedure may lead to joint failure. In this article, welded joints failures has been documented and it has been observed that failure can occur due to the change in welding procedure in the case of the weld neck flanged pipe joints, or by fatigue failure initiated during transportation of equipment or by change of type of fuel in the case of the boiler.

Keywords
Weld toe, weld cracking, quality control; transportation fatigue failure.