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Simulation of Welded Steel Tube Subjected to Internal Pressure

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Abstract : The rapid pace of technology development and strong competition in the market, prompted us to consider the field of manufacturing of steel pipes by a process complies fully with the requirements of industrial induction welding is high frequency (HF), this technique is better known today in Algeria, more precisely for the manufacture of tubes diameters Single Annabib TG Tebessa. The aim of our study is based on the characterization of processes controlling the mechanical behavior of steel pipes (type E24-2), welded by high frequency induction, considering the different tests and among the most destructive known test internal pressure. The internal pressure test is performed according to the application area of welded pipes, or as leak test, either as a test of strength (bursting). All tubes are subjected to a hydraulic test pressure of 50 bar kept at room temperature for a period of 6 seconds. This study provides information that helps optimize the design and implementation to predict the behavior of the tubes during operation.

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