NDE scope, Comparison between ASME section 1 and Chinese standard DL 5007, lessons learned from Khartoum North power station extension project

Salah Eldin Mohamed Abdalla

Quality, Inspection and Testing Senior Engineer, Sudanese Thermal Power Generating Company
Salahaldeen2000@yahoo.com

Abstract
The NDE scope is the essential part of the quality control of the construction and erection of power plant components, the extend of the NDE requirement is specified by the construction codes. Khartoum North power station extension project is an EPC contract with a Chinese contractor who is normally using Chinese standard DL 5007 (erection and acceptance for electric power plant construction welding section). according to the contract ASME requirements for NDE is to be used (ASME 1 for boilers, ASME VIII for pressure vessels and ASME B31.1 for piping). The criteria for NDE is different on the two system, the quality control approach is very clear on the Chinese standard DL 5007, the NDE requirement is much more in the Chinese standard in the percentage rates and the no of tests types the code asked to be carried out. The Chinese standard DL 5007 is made to control the Chinese welding personnel.

Keywords: welding, radiography (RT), ultrasonic (UT), visual inspection, spectrum testing, Hardness testing, quality control, construction, codes, Standards,