

Safeguarding Product Quality through Pre-Qualification of Material Manufacturers: A Ship and Offshore Classification Society's Perspective

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Abstract : Despite recent advances in the manufacturing sector, quality issues remain a frequent occurrence, and can result in fatal accidents, equipment downtime, and loss of life. Adequate quality is of high importance in high-risk industries such as sea-going vessels and offshore installations in which third party quality assurance and product control play an important essential role in ensuring manufacturing quality of critical components. Classification societies play a vital role in mitigating risk in these industries by making sure that all the stakeholders i.e. manufacturers, builders, and end users are provided with adequate rules and standards that effectively ensures components produced at a high level of quality based on the area of application and risk of its failure. Quality issues have also been linked to the lack of competence or negligence of stakeholders in supply value chain. However, continued actions and regulatory reforms through modernization of rules and requirements has provided additional tools for purchasers and manufacturers to confront these issues. Included among these tools are updated 'approval of manufacturer class programs' aimed at developing and implementing a set of standardized manufacturing quality metrics for use by the manufacturer and verified by the classification society. The establishment and collection of manufacturing and testing requirements described in these programs could provide various stakeholders - from industry to vessel owners - with greater insight into the state of quality at a given manufacturing facility, and allow stakeholders to anticipate better and address quality issues while simultaneously reducing unnecessary failures that are costly to the industry. The publication introduces, explains and discusses critical manufacturing and testing requirements set in a leading class society's approval of manufacturer regime and its rationale and some case studies.

Keywords : classification society, manufacturing, materials processing, materials testing, quality control

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