

WESTINGHOUSE AP1000® GENERIC DESIGN ASSESSMENT

GDA ISSUE

MATERIALS – AP1000 MATERIAL STANDARDS AND MATERIAL SPECIFICATIONS

GI-AP1000-CE-03 REVISION 0

Technical Area		CIVIL ENGINEERING	
Related Technical Areas		None	
GDA Issue Reference	GI-AP1000-CE-03	GDA Issue Action Reference	GI-AP1000-CE-03.A1
GDA Issue	Justification that materials adopted on the AP1000 are compatible for what would normally be expected for European construction. Clear statement on procedures for accepting suppliers proposals for material substitution of European materials for the US materials specified in the AP1000 design.		
GDA Issue Action	<p>STEEL PLATE MATERIALS</p> <p>The specific material properties listed below must be added into the material specifications to be used in the construction.</p> <ul style="list-style-type: none"> • Steel plate US standards ASTM A572, A588 cover certain steel grades and thicknesses. Identify which standards will be used and explain their applicability and suitability in situations where steel plate is to be used outside of the range covered by proposed standards. • It is usual practice in Europe to specify maximum values of yield and tensile strengths and the ratio of yield to tensile. This is to ensure appropriate ductile behaviour. As ASTM 572 does not specify maximum strengths, define the maximum strengths to be specified as additional clauses to US steel standards A572, Duplex 2101 etc. This may be done on a structure by structure basis depending on the ductile performance required. • Justify the environment is appropriate for the performance of ASTM A588 in all locations where it is to be used. • Specify the Charpy V notch impact tests for all steels. <p>With agreement from the Regulator this action may be completed by alternative means.</p>		

Office for Nuclear Regulation

An agency of HSE

Redgrave Court Merton Road Bootle Merseyside L20 7HS
Tel: 0151 951 4000 www.hse.gov.uk/nuclear

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GDA Issue Reference	GI-AP1000-CE-03	GDA Issue Action Reference	GI-AP1000-CE-03.A2
GDA Issue Action	CONCRETE MATERIALS The AP1000 specification for safety related mixing and delivering concrete is stated in document number APP-CC01-Z0-026. Westinghouse shall provide ongoing support to ONR, and provide any supplementary evidence as appropriate, to justify that the concrete materials specification does not compromise the structural design intent. With agreement from the Regulator this action may be completed by alternative means.		