



Offshore Design Section  
Engineering Services  
ISO – 9001:2000

**ADDENDUM TO FUNCTIONAL  
SPECIFICATION FOR  
CARBON STEEL SEAMLESS  
LINEPIPE FOR SUBMARINE  
PIPELINES (NON SOUR  
SERVICE)**

<b>Spec. No.</b>	ADDENDUM TO SPEC 2020 A, REV 5
<b>Rev. No.</b>	0
<b>Discipline</b>	PIPELINE
<b>Page: 1 OF 2</b>	

**ADDENDUM TO  
FUNCTIONAL SPECIFICATION  
FOR  
CARBON STEEL SEAMLESS LINEPIPE  
FOR  
SUBMARINE PIPELINES  
(NON SOUR SERVICE)**

Prepared By

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Sl. No.	Clause Reference, page no.	Existing provision in spec.	Modified Clause of Spec.																										
1	8.3.2 Amend Page no. 11 of 33	Pipes furnished to this specification shall be made from basic-oxygen steel or electric arc furnace steel. Steel shall be vacuum degassed. Steel shall be made by continuous casting only. Pipes shall be seamless construction. Manufacturing procedure as mentioned in Annex B (Amended) of this specification shall be prepared and submitted to Company for approval prior to start of production.	<p><i>Pipes furnished to this specification shall be made from basic-oxygen steel or electric arc furnace steel. Steel shall be vacuum degassed. Steel shall be made by continuous casting only.</i></p> <p><i>Steel shall be treated for inclusion shape control.</i></p> <p><i>Steel shall be sampled for inclusion content as per ASTM E-45 and tested for Inclusion Content by JK-type inclusion ratings procedure using automatic image analysis in accordance with microscopic Method -A of ASTM E-45 and reported as per ASTM E-45.</i></p> <p><i>Maximum limit of inclusion severity level in steel, as per ASTM E-45 Standard, method A, shall be as under:</i></p> <table><tr><th><i>Inclusion Type</i></th><th colspan="2"><i>Type A (Sulphide)</i></th><th colspan="2"><i>Type B (Alumina)</i></th><th colspan="2"><i>Type C (Silicate)</i></th><th colspan="2"><i>Type D (Globular Oxide)</i></th></tr><tr><th rowspan="2"><i>Severity Level</i></th><th><i>Thin</i></th><th><i>Heavy</i></th><th><i>Thin</i></th><th><i>Heavy</i></th><th><i>Thin</i></th><th><i>Heavy</i></th><th><i>Thin</i></th><th><i>Heavy</i></th></tr><tr><td>1.5</td><td>1.0</td><td>1.5</td><td>1.0</td><td>1.5</td><td>1.0</td><td>1.5</td><td>1.0</td></tr></table> <p><i>Pipes shall be seamless construction. Manufacturing procedure as mentioned in Annex B (Amended) of this specification shall be prepared and submitted to Company for approval prior to start of production.</i></p>	<i>Inclusion Type</i>	<i>Type A (Sulphide)</i>		<i>Type B (Alumina)</i>		<i>Type C (Silicate)</i>		<i>Type D (Globular Oxide)</i>		<i>Severity Level</i>	<i>Thin</i>	<i>Heavy</i>	<i>Thin</i>	<i>Heavy</i>	<i>Thin</i>	<i>Heavy</i>	<i>Thin</i>	<i>Heavy</i>	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0
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