

 Jindal Pipe USA, Inc. 1411, S.FM 565, Baytown, Texas, 77523, USA		Material Test Certificate (AS PER EN 10204 / ISO 10474 TYPE 3.1/ 3.2)																				Document No. : FM/JPU/Q-10 Rev. No. : 01 Effective Date : 09-12-2022																	
MTC NO & DATE		: 4823000385-10 & 11/19/2025																		PIPE SIZE		: 20.00" OD x 0.375" WT																	
CLIENT NAME		: J.D. Fields & Company Texas USA																		SPECIFICATION		: API 5L 46th Edition																	
PO NO		: ST-82159 Dated 11/06/2025																		GRADE		: X65M PSL2																	
SALES ORDER NO.		: 4823000385-10																		DELIVERY CONDITION		: Thermomechanical Rolled		TYPE OF PIPE		: HFW													
STEEL SUPPLIER		: Big River Steel																		TALLY SHEET NO.		: Refer Tally Attached																	
Steel Rolling		: Osceola, AR																		Steel Melted		: USA																	
PO ITEM NO		Heat No.		QTY. RELEASED		No. of PCS		Length (feet)																															
1		25091462		Reference Tally Attached																																			
% Chemical Composition																																							
S.No.	Pipe No./ Coil No.	Heat No.	Heat/ Product	C	Mn	Si	S	P	Al	Nb	V	Ti	Cr	Mo	Cu	Ni	N	B	Ca	Al/N	Nb+V+Ti	Cu+ Ni+Cr+ Mo+V	CE PCM					Result	Remarks										
Specified Requirement				Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-														
				Max	0.12	1.60	0.45	0.015	0.025	-	-	-	0.50	0.50	0.50	0.50	-	0.0010	-	-	0.15	-	0.25	-															
1		25091462	H	0.040	1.420	0.200	0.0040	0.0130	0.035	0.051	0.004	0.015	0.050	0.130	0.090	0.030	0.0062	0.0001	0.0028	5.6	0.070	0.304	0.13																
2	E25047151		P	0.037	1.429	0.197	0.0018	0.0132	0.043	0.052	0.006	0.015	0.042	0.136	0.097	0.019	0.0047	0.0002	0.0013	9.0	0.073	0.300	0.13					Pass											
3	E25047165		P	0.036	1.403	0.203	0.0051	0.0151	0.044	0.052	0.006	0.014	0.043	0.139	0.096	0.020	0.0028	0.0002	0.0017	15.8	0.066	0.304	0.13					Pass											
Mechanical Properties																																							
S.No.	Pipe No./ Coil No.	Heat No.	M/P	TENSILE TEST (EUL -0.5%)												Charpy Impact test - Orientation : Transverse												Hardness Test						Metallographic Examination	DWTT				
				BASE METAL												Weld Metal	Base Metal Absorbed Energy (ft-lb)				Base Metal % Shear Area				Weld (FI+1 mm)- Absorbed Energy(ft-lb)				Base		Weld		HAZ		Base -% Shear Area				
				Longitudinal						Transverse							Test Temp 32°F/0°C				Test Temp 32°F/0°C				-														
				YS (KSI)	UTS (KSI)	% EL	YS / UTS	%Elu	YS (KSI)	UTS (KSI)	% EL	YS / UTS	%Elu	UTS (KSI)	1		2	3	Avg	1	2	3	Avg	1	2	2	Avg	Min	Max	Min	Max	Min	Max						
				Specified Requirement				Min.	-	-	-	-	-	65.3	77.6	23	-	-	77.6	16	16	16	20	75	75	75	85	-	-	-	-	-	-		-	-	-	-	-
				Max.	-	-	-	-	-	87.0	110.2	-	0.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	E25047151	25091462	P	-	-	-	-	-	-	72.44	87.09	29.36	0.83	7.53	92.09	291	297	223	270	100	100	100	100	268	271	268	269	183	215	202	205	202	212	Full Seam Annealing	-	-	-		
Notes																																							
1 Review of Raw Material Test Certificate, Visual & Dimensional Inspection, Tensile Test on HR coil performed and the result found within the acceptable limits.																																							
2 Flattening tests performed on minimum 4" ring samples at 0° and 90° in each coil as per API 5L, 46th Edition/ Customer specification and found acceptable.																																							
3 Chemical, Mechanical and Metallographic Tests on pipe samples performed as per agreed QAP / ITP and the result of tests found within the acceptable limit. The tensile test samples with 1.5" Wide strip specimen and full thickness are tested.																																							
4 For Charpy V notch Impact test, Sub Size (0.295" X 0.394" X 2.165") specimens were tested at specified test temperature. The Absorbed Energy values are reported for full size specimen. Charpy weld (FI+1mm) at 32F has been tested and found satisfactory.																																							
5 Each pipe weld seam Normalized at temperature of Minimum 1600°F. It is observed and confirmed that normalizing of weld seam area is through-out the entire wall thickness and no untampered martensite observed.																																							
6 Ends of each pipe bevelled as per QAP and/or customer requirements.																																							
7 Hydro test carried out on each pipe at test pressure 2330 PSI minimum for 10 seconds minimum holding time & no leakage or sweating observed. The test results of supplied pipes are satisfactory.																																							
8 100 % Ultrasonic Testing of each pipe weld seam carried out as per agreed QAP/ITP & Customer Specifications and the results found satisfactory. Reference standard used for calibration are Longitudinal N10 Notches inside & outside. The test results found satisfactory.																																							
9 Manual Ultrasonic Test of each untested end for minimum 6" length at weld seam and prove-up of any indication of Automatic Weld UT . During Manual Ultrasonic Test, if any defect found ,the pipe is downgraded or cut (if it meets agreed pipe length requirements). All the supplied pipes are satisfactory. Reference standard used for calibration are N10 Notch at center of the weld seam.																																							
10 Visual & Dimensional Inspection on each pipe carried out as per agreed QAP/ITP & Customer Specifications and found satisfactory. Residual Magnetism is measured as required and found with in acceptance limits.																																							
11 It is certified that the material has been produced in accordance with the agreed Customer PO/Specification, API 5L 46th Edition and NACE MR0175. The steel used to produce the pipes is fully killed, fine grained , Ca treated and continuously casted.																																							
12 Abbreviations used : M - Mill Control Test, P - Product, T - Test Orientation Transverse, L - Test Orientation Longitudinal, YS - Yield Strength at 0.5% EUL, UTS - Ultimate Tensile Strength, %El - % Elongation, HAZ - Heat Affected Zone, DWTT - Drop weight Tear Test, Avg - Average.																																							
13 Formulae for - CE PCM = C + Si/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5B ; CE IIW = C + Mn/6 + (Cr + Mo + V) / 5 + (Ni + Cu) / 15																																							
Prepared by <i>Aaravind Surendran</i>															Approved By Quality /Lab Manager <i>Suresh Jadon</i>															Customer / TPI (as required)									

11/19/2025

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SALES ORDER NO.		: 4823000385-10																		DELIVERY CONDITION		: Thermomechanical Rolled		TYPE OF PIPE		: HFW													
STEEL SUPPLIER		: Big River Steel																		TALLY SHEET NO.		: Refer Tally Attached																	
Steel Rolling		: Osceola, AR																		Steel Melted		: USA																	
PO ITEM NO		Heat No.		QTY. RELEASED		No. of PCS		Length (feet)																															
1		25112471		Reference Tally Attached																																			
% Chemical Composition																																							
S.No.	Pipe No./ Coil No.	Heat No.	Heat/ Product	C	Mn	Si	S	P	Al	Nb	V	Ti	Cr	Mo	Cu	Ni	N	B	Ca	Al/N	Nb+V+Ti	Cu+ Ni+Cr+ Mo+V	CE PCM					Result	Remarks										
Specified Requirement				Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-														
				Max	0.12	1.60	0.45	0.015	0.025	-	-	-	0.50	0.50	0.50	0.50	-	0.0010	-	-	0.15	-	0.25	-															
1		25112471	H	0.040	1.430	0.180	0.0010	0.0050	0.028	0.053	0.005	0.013	0.030	0.150	0.070	0.030	0.0081	0.0001	0.0022	3.5	0.071	0.285	0.13																
2	E25042234		P	0.043	1.409	0.185	0.0018	0.0065	0.028	0.055	0.005	0.014	0.029	0.148	0.075	0.031	0.0087	0.0003	0.0020	3.2	0.074	0.288	0.14					Pass											
3	E25042250		P	0.043	1.407	0.184	0.0018	0.0073	0.029	0.055	0.005	0.014	0.032	0.149	0.073	0.030	0.0086	0.0003	0.0021	3.4	0.074	0.289	0.14					Pass											
Mechanical Properties																																							
S.No.	Pipe No./ Coil No.	Heat No.	M/P	TENSILE TEST (EUL -0.5%)												Charpy Impact test - Orientation : Transverse												Hardness Test						Metallographic Examination	DWTT				
				BASE METAL												Weld Metal	Base Metal Absorbed Energy (ft-lb)				Base Metal % Shear Area				Weld (FI+1 mm)- Absorbed Energy(ft-lb)				Base		Weld		HAZ		Base -% Shear Area				
				Longitudinal						Transverse							Test Temp 32°F/0°C				Test Temp 32°F/0°C				-														
				YS (KSI)	UTS (KSI)	% EL	YS / UTS	%Elu	YS (KSI)	UTS (KSI)	% EL	YS / UTS	%Elu	UTS (KSI)	1		2	3	Avg	1	2	3	Avg	1	2	2	Avg	Min	Max	Min	Max	Min	Max						
				Specified Requirement				Min.	-	-	-	-	-	65.3	77.6	23	-	-	77.6	16	16	16	20	75	75	75	85	-	-	-	-	-	-		-	-	-	-	-
				Max.	-	-	-	-	-	87.0	110.2	-	0.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	E25042234	25112471	P	-	-	-	-	-	-	70.26	85.23	31.08	0.82	7.91	89.62	284	304	297	295	100	100	100	100	303	299	291	298	171	202	188	199	185	203	Full Seam Annealing	-	-	-		
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Steel Rolling		: Osceola, AR																		Steel Melted		: USA																		
PO ITEM NO		Heat No.		QTY. RELEASED		No. of PCS		Length (feet)																				Pipe Manufactured in USA												
1		25112331		Reference Tally Attached																								 API SPEC 5L - 1232 (API MONOGRAM) MM-YY 20 0.375 X65M PSL2 HFW PIPE NO.: ... TESTED PSI HEAT NO.: ... LENGTH: ... FEET WEIGHT..... lb/ft MADE IN USA												
% Chemical Composition																																								
S.No.	Pipe No./ Coil No.	Heat No.	Heat/ Product	C	Mn	Si	S	P	Al	Nb	V	Ti	Cr	Mo	Cu	Ni	N	B	Ca	Al/N	Nb+V+Ti	Cu+ Ni+Cr+ Mo+V	CE PCM					Result	Remarks											
Specified Requirement				Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
				Max	0.12	1.60	0.45	0.015	0.025	-	-	-	0.50	0.50	0.50	0.50	-	0.0010	-	-	0.15	-	0.25	-	-	-	-	-	-											
1		25112331	H	0.050	1.470	0.210	0.0010	0.0080	0.031	0.055	0.005	0.017	0.040	0.170	0.080	0.030	0.0082	0.0002	0.0027	3.8	0.077	0.325	0.15					Pass												
2	E25041923		P	0.053	1.410	0.210	0.0008	0.0076	0.032	0.055	0.005	0.019	0.030	0.146	0.086	0.033	0.0109	0.0003	0.0020	2.9	0.079	0.300	0.15					Pass												
3	E25041942		P	0.051	1.410	0.205	0.0010	0.0079	0.031	0.054	0.005	0.018	0.031	0.148	0.087	0.034	0.0107	0.0003	0.0021	2.9	0.077	0.305	0.15					Pass												
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S.No.	Pipe No./ Coil No.	Heat No.	M/P	TENSILE TEST (EUL -0.5%)												Charpy Impact test - Orientation : Transverse												Hardness Test						Metallographic Examination	DWTT					
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				Specified Requirement				Min.	-	-	-	-	-	65.3	77.6	23	-	-	77.6	16	16	16	20	75	75	75	85	-	-	-	-	-	-	-	-	-	-	-	-	-
				Max.	-	-	-	-	-	87.0	110.2	-	0.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	E25041923	25112331	P	-	-	-	-	-	-	70.98	87.19	29.38	0.81	7.76	91.07	279	286	276	281	100	100	100	100	275	290	288	284	176	206	193	206	187	206	Full Seam Annealing	-	-	-			
Notes																																								
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Steel Rolling		: Osceola, AR																		Steel Melted		: USA																
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Specified Requirement				Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-														
				Max	0.12	1.60	0.45	0.015	0.025	-	-	-	0.50	0.50	0.50	0.50	-	0.0010	-	-	0.15	-	0.25															
1		25110062	H	0.041	1.436	0.194	0.0003	0.0082	0.030	0.051	0.005	0.012	0.042	0.146	0.098	0.038	0.0069	0.0002	0.0018	4.3	0.067	0.329	0.14					Pass										
2	E25038747		P	0.045	1.445	0.194	0.0004	0.0086	0.032	0.053	0.005	0.013	0.040	0.152	0.099	0.037	0.0069	0.0003	0.0021	4.6	0.071	0.333	0.14					Pass										
3	E25038755		P	0.041	1.436	0.191	0.0005	0.0089	0.031	0.052	0.005	0.012	0.037	0.145	0.102	0.037	0.0066	0.0003	0.0017	4.7	0.069	0.326	0.14					Pass										
Mechanical Properties																																						
S.No.	Pipe No./ Coil No.	Heat No.	M/P	TENSILE TEST (EUL -0.5%)										Charpy Impact test - Orientation : Transverse										Hardness Test						Metallographic Examination	DWTT							
				BASE METAL										Weld Metal	Base Metal Absorbed Energy (ft-lb)				Base Metal % Shear Area				Weld (FI+1 mm)- Absorbed Energy(ft-lb)				Base		Weld		HAZ		Base -% Shear Area					
				Longitudinal					Transverse						Test Temp 32°F/0°C				Test Temp 32°F/0°C				-															
				YS (KSI)	UTS (KSI)	% EL	YS / UTS	%Elu	YS (KSI)	UTS (KSI)	% EL	YS / UTS	%Elu		UTS (KSI)	1	2	3	Avg	1	2	3	Avg	1	2	2	Avg	Min	Max	Min	Max	Min		Max				
Specified Requirement				Min.	-	-	-	-	-	65.3	77.6	23	-	-	77.6	16	16	16	20	75	75	75	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Max.	-	-	-	-	-	87.0	110.2	-	0.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	E25038747	25110062	P	-	-	-	-	-	-	70.39	87.79	31.25	0.80	8.38	92.51	284	261	288	278	100	100	100	100	259	294	277	277	169	209	202	207	198	207	Full Seam Annealing	-	-	-	
Notes																																						
1 Review of Raw Material Test Certificate, Visual & Dimensional Inspection, Tensile Test on HR coil performed and the result found within the acceptable limits.																																						
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7 Hydro test carried out on each pipe at test pressure 2330 PSI minimum for 10 seconds minimum holding time & no leakage or sweating observed. The test results of supplied pipes are satisfactory.																																						
8 100 % Ultrasonic Testing of each pipe weld seam carried out as per agreed QAP/ITP & Customer Specifications and the results found satisfactory. Reference standard used for calibration are Longitudinal N10 Notches inside & outside. The test results found satisfactory.																																						
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12 Abbreviations used : M - Mill Control Test, P - Product, T - Test Orientation Transverse, L - Test Orientation Longitudinal, YS - Yield Strength at 0.5% EUL, UTS - Ultimate Tensile Strength, %El - % Elongation, HAZ - Heat Affected Zone, DWTT - Drop weight Tear Test, Avg - Average.																																						
13 Formulae for - CE PCM = C + Si/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5B ; CE IIW = C + Mn/6 + (Cr + Mo + V) / 5 + (Ni + Cu) / 15																																						
Prepared by <i>Aravind Surendran</i>														Approved By <i>Quality /Lab Manager</i> <i>Suresh Jadon</i>														Customer / TPI (as required)										

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 Jindal Pipe USA, Inc. 1411, S.FM 565, Baytown, Texas, 77523, USA		Material Test Certificate (AS PER EN 10204 / ISO 10474 TYPE 3.1/ 3.2)																				Document No. : FM/JPU/Q-10 Rev. No. : 01 Effective Date : 09-12-2022																
MTC NO & DATE		: 4823000385-10 & 11/19/2025																		PIPE SIZE		: 20.00" OD x 0.375" WT																
CLIENT NAME		: J.D. Fields & Company Texas USA																		SPECIFICATION		: API 5L 46th Edition																
PO NO		: ST-82159 Dated 11/06/2025																		GRADE		: X65M PSL2																
SALES ORDER NO.		: 4823000385-10																		DELIVERY CONDITION		: Thermomechanical Rolled		TYPE OF PIPE		: HFW												
STEEL SUPPLIER		: Big River Steel																		TALLY SHEET NO.		: Refer Tally Attached																
Steel Rolling		: Osceola, AR																		Steel Melted		: USA																
PO ITEM NO		Heat No.		QTY. RELEASED		No. of PCS		Length (feet)																														
1		25112551		Reference Tally Attached																																		
% Chemical Composition																																						
S.No.	Pipe No./ Coil No.	Heat No.	Heat/ Product	C	Mn	Si	S	P	Al	Nb	V	Ti	Cr	Mo	Cu	Ni	N	B	Ca	Al/N	Nb+V+Ti	Cu+ Ni+Cr+ Mo+V	CE PCM					Result	Remarks									
Specified Requirement				Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-														
				Max	0.12	1.60	0.45	0.015	0.025	-	-	-	0.50	0.50	0.50	0.50	-	0.0010	-	-	0.15	-	0.25															
1		25112551	H	0.040	1.410	0.190	0.0020	0.0050	0.028	0.055	0.004	0.014	0.030	0.170	0.070	0.030	0.0061	0.0001	0.0025	4.6	0.073	0.304	0.13															
2	E25042492		P	0.048	1.399	0.183	0.0029	0.0055	0.028	0.057	0.005	0.014	0.031	0.168	0.067	0.027	0.0079	0.0003	0.0022	3.5	0.076	0.298	0.14					Pass										
3	E25042511		P	0.044	1.396	0.176	0.0037	0.0065	0.028	0.055	0.005	0.013	0.035	0.160	0.068	0.027	0.0079	0.0003	0.0020	3.5	0.073	0.295	0.14					Pass										
Mechanical Properties																																						
S.No.	Pipe No./ Coil No.	Heat No.	M/P	TENSILE TEST (EUL -0.5%)										Charpy Impact test - Orientation : Transverse										Hardness Test						Metallographic Examination	DWTT							
				BASE METAL										Weld Metal	Base Metal Absorbed Energy (ft-lb)				Base Metal % Shear Area				Weld (FI+1 mm)- Absorbed Energy(ft-lb)				Base		Weld		HAZ		Base -% Shear Area					
				Longitudinal					Transverse						Test Temp 32°F/0°C				Test Temp 32°F/0°C				-															
				YS (KSI)	UTS (KSI)	% EL	YS / UTS	%Elu	YS (KSI)	UTS (KSI)	% EL	YS / UTS	%Elu		UTS (KSI)	1	2	3	Avg	1	2	3	Avg	1	2	2	Avg	Min	Max		Min	Max		Min	Max			
Specified Requirement				Min.	-	-	-	-	-	65.3	77.6	23	-	-	77.6	16	16	16	20	75	75	75	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Max.	-	-	-	-	-	87.0	110.2	-	0.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	E25042492	25112551	P	-	-	-	-	-	-	67.80	86.35	30.36	0.79	7.54	89.17	206	265	239	237	100	100	100	100	282	285	277	281	177	207	196	201	192	206	Full Seam Annealing	-	-	-	
Notes																																						
1	Review of Raw Material Test Certificate, Visual & Dimensional Inspection, Tensile Test on HR coil performed and the result found within the acceptable limits.																																					
2	Flattening tests performed on minimum 4" ring samples at 0° and 90° in each coil as per API 5L, 46th Edition/ Customer specification and found acceptable.																																					
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4	For Charpy V notch Impact test, Sub Size (0.295" X 0.394" X 2.165") specimens were tested at specified test temperature. The Absorbed Energy values are reported for full size specimen. Charpy weld (FI+1mm) at 32F has been tested and found satisfactory.																																					
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6	Ends of each pipe bevelled as per QAP and/or customer requirements.																																					
7	Hydro test carried out on each pipe at test pressure 2330 PSI minimum for 10 seconds minimum holding time & no leakage or sweating observed. The test results of supplied pipes are satisfactory.																																					
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9	Manual Ultrasonic Test of each untested end for minimum 6" length at weld seam and prove-up of any indication of Automatic Weld UT . During Manual Ultrasonic Test, if any defect found ,the pipe is downgraded or cut (if it meets agreed pipe length requirements). All the supplied pipes are satisfactory. Reference standard used for calibration are N10 Notch at center of the weld seam.																																					
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12	Abbreviations used : M - Mill Control Test, P - Product, T - Test Orientation Transverse, L - Test Orientation Longitudinal, YS - Yield Strength at 0.5% EUL, UTS - Ultimate Tensile Strength, %El - % Elongation, HAZ - Heat Affected Zone, DWTT - Drop weight Tear Test, Avg - Average.																																					
13	Formulae for - CE PCM = C + Si/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5B ; CE IIW = C + Mn/6 + (Cr + Mo + V) / 5 + (Ni + Cu) / 15																																					
Prepared by <i>Aaravind Surendran</i> Approved By <i>Quality /Lab Manager</i> <i>Suresh Jadon</i> Customer / TPI (as required)																																						

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11/19/2025

 Jindal Pipe USA, Inc 1411, S.FM 565, Baytown, Texas, 77523, USA		Material Test Certificate (AS PER EN 10204 / ISO 10474 TYPE 3.1/ 3.2)																				Document No. : FM/JPU/Q-10 Rev. No. : 01 Effective Date : 09-12-2022																
MTC NO & DATE		: 4823000385-10 & 11/19/2025																		PIPE SIZE		: 20.00" OD x 0.375" WT																
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PO NO		: ST-82159 Dated 11/06/2025																		GRADE		: X65M PSL2																
SALES ORDER NO.		: 4823000385-10																		DELIVERY CONDITION		: Thermomechanical Rolled		TYPE OF PIPE		: HFW												
STEEL SUPPLIER		: Big River Steel																		TALLY SHEET NO.		: Refer Tally Attached																
Steel Rolling		: Osceola, AR																		Steel Melted		: USA																
PO ITEM NO		Heat No.		QTY. RELEASED		No. of PCS		Length (feet)																														
1		25112591		Reference Tally Attached																																		
% Chemical Composition																																						
S.No.	Pipe No./ Coil No.	Heat No.	Heat/ Product	C	Mn	Si	S	P	Al	Nb	V	Ti	Cr	Mo	Cu	Ni	N	B	Ca	Al/N	Nb+V+Ti	Cu+ Ni+Cr+ Mo+V	CE PCM					Result	Remarks									
Specified Requirement				Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-														
				Max	0.12	1.60	0.45	0.015	0.025	-	-	-	0.50	0.50	0.50	0.50	-	0.0010	-	-	0.15	-	0.25															
1		25112591	H	0.050	1.410	0.190	0.0030	0.0050	0.034	0.056	0.005	0.014	0.040	0.160	0.070	0.030	0.0076	0.0001	0.0024	4.5	0.075	0.305	0.14															
2	E25042665		P	0.049	1.417	0.198	0.0029	0.0052	0.035	0.057	0.005	0.014	0.031	0.164	0.073	0.032	0.0074	0.0003	0.0022	4.7	0.076	0.305	0.15					Pass										
3	E25042684		P	0.040	1.411	0.181	0.0028	0.0051	0.036	0.056	0.005	0.014	0.031	0.162	0.071	0.032	0.0071	0.0003	0.0023	5.1	0.075	0.301	0.14					Pass										
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S.No.	Pipe No./ Coil No.	Heat No.	M/P	TENSILE TEST (EUL -0.5%)										Charpy Impact test - Orientation : Transverse										Hardness Test						Metallographic Examination	DWTT							
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				Longitudinal					Transverse						Test Temp 32°F/0°C				Test Temp 32°F/0°C				-															
				YS (KSI)	UTS (KSI)	% EL	YS / UTS	%Elu	YS (KSI)	UTS (KSI)	% EL	YS / UTS	%Elu		UTS (KSI)	1	2	3	Avg	1	2	3	Avg	1	2	2	Avg	Min	Max		Min	Max		Min	Max			
Specified Requirement				Min.	-	-	-	-	-	65.3	77.6	23	-	-	77.6	16	16	16	20	75	75	75	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Max.	-	-	-	-	-	87.0	110.2	-	0.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	E25042665	25112591	P	-	-	-	-	-	-	67.98	86.17	28.99	0.79	7.71	89.49	180	272	205	219	100	100	100	100	300	293	287	293	178	210	201	203	195	205	Full Seam Annealing	-	-	-	
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Prepared by <i>Aravind Surendran</i> Approved By Quality /Lab Manager <i>Suresh Jadon</i> Customer / TPI (as required)																																						

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