

EA-109251

DATE: 21/06/18

# PETROFLANGE

CERTIFICATE NUMBER: 1440

## MATERIAL TEST CERTIFICATE

VENDIDO A: INDUSTRIAS IBERO STEEL S.A. DE C.V.  
 PEDIDIO: OC-465

Dimension Standard: ANSI/ASME B16.9-18

Material Standard: ASME A234/ ASTM A234M-17 A WPB  
 NACE MR 0175-15 ISO 15156

ITEM	DESCRIPTION	SIZE	QTY (PCS)	HEAT NO.	CHEMICAL COMPOSITION (%)											
					C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	Nb	CE
					0.30 Max.	0.10 Min.	0.29-1.06	0.050 Max.	0.058 Max.	0.40 Max.	0.40 Max.	0.15 Max.	0.40 Max.	0.08 Max.	0.02 Max.	.50 Max.
1	CAP SCH40 WPB	18	5	491	0.238	0.242	0.452	0.022	0.013	0.019	0.114	0.068	0.110	0.015	0.007	0.35
2	CAP SCH40 WPB	18	3	051	0.211	0.183	0.507	0.019	0.011	0.021	0.103	0.054	0.116	0.011	0.009	0.33

### MECHANICAL PROPERTIES

ITEM	DESCRIPTION	SIZE	QTY (PCS)	HEAT NO.	TENSILE STRENGTH Min. 415 Mpa	YIELD STRENGTH Min. 240 Mpa	EL2IN (%) Min. 30%	HARDNESS (HB) 197 Max.	NOTES
2	CAP SCH40 WPB	18	3	051	499	312	37	179	

We hereby certify that the products described herein has been manufactured in compliance with ASTM A234 WPB and ANSI B16.9 and that the test results shown herein are correct.

  
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 QUALITY MANAGER

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**VENDIDO A:** INDUSTRIAS IBERO STEEL S.A. DE C.V.  
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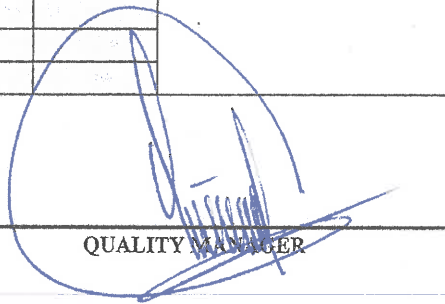
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1	CAP SCH40 WPB	18	5	491	0.238	0.242	0.452	0.022	0.013	0.019	0.114	0.068	0.110	0.015	0.007	0.35
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MECHANICAL PROPERTIES										
ITEM	DESCRIPTION	SIZE	QTY (PCS)	HEAT NO.	TENSILE STRENGTH	YIELD STRENGTH	EL2IN (%)	HARDNESS (HB)	NOTES	
					Min. 415 Mpa	Min. 240 Mpa	Min. 30%	197 Max.		
1	CAP SCH40 WPB	18	5	491	500	302	39	183	HOT FORMED 620-980°C AND COOLED IN STILL AIR	
2	CAP SCH40 WPB	18	3	051	499	312	37	179		
									Cu+Ni+Cr+Mo = <OR =1.00%	
									Cr+Mo = <OR =0.32%	

We hereby certify that the products described herein has been manufactured in compliance with ASTM A234 WPB and ANSI B16.9 and that the test results shown herein are correct.

  
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 QUALITY MANAGER