



<p><b>aperam</b></p> <p>Correspondentieadres: Aperam Genk Swinnowierweg 5, Poort Genk 7523 3600 Genk, Belgium Tel. +32 (0)89 30 21 11</p>		<p><b>MILL CERTIFICATE BS EN 10204/3.1</b> <b>CERTIFICAT DE RECEPTION NF EN 10204/3.1</b> <b>ABNAHMEPRUEFZEUGNIS DIN EN 10204/3.1</b></p>		<p>N-N-N 14K0047912-01 Y01</p>		<p>A03</p>																																																								
<p>Technical specification: ASME SA 240-2014 TYPE 316L / 316 EN 10028-7-2008 1.4404 / 1.4401</p>		<p>Product - Product - Erzeugnis COLLS, HOT ROLLED, ANNEALED AND PICKLED COLLS, LAMINE A CHAUD, REÇUTS + DECAPE COLLS, WARMGEWALZT, GEGLÜHT UND GEBRIZT</p>		<p>Technical specification: ASME SA 240-2014 TYPE 316L / 316 EN 10028-7-2008 1.4404 / 1.4401</p>		<p>Product delivery condition Etat de livraison du produit - Lieferzustand Solution treated: Hypertrempé: 1050 °C Lösungsgegl-/abgeschreckt: Forced air-water/air forced-eau Gebäuses Luft-Wasser</p>																																																								
<p>Manufacturer's works order number N° de la commande usine productrice 80216881709-69901/064/09</p>		<p>Surveyor's mark Cachet de l'expert Stempel des Werkstachverständigen</p>		<p>Purchaser's order number N° de commande client Kundenbestellnummer U140606 - LOT # 3</p>		<p>A07</p>																																																								
<p>Steel designation Désignation de l'acier Stahlbezeichnung</p>		<p>Finish Présentation Auslieferung</p>		<p>Steelmaking process Mode d'élaboration de l'acier - Stahlherstellungsvorgehen Prod process: Electric arc furnace - VOD/AOD - Continuous casting Proc.fabric: Four à arc - VOD/AOD - Coulee continue Fertigungsablauf: Elektro-Ofen - VOD/AOD - Stranggussanlage</p>		<p>Customer article number N° article client Artikelnummer des Kunden</p>																																																								
<p>Identification of the product Identificación del producto - Identifizierung des Erzeugnisses MELTED IN BELGIUM, MADE IN BELGIUM</p>		<p>Dimensions - Abmessungen</p>		<p>Number of pieces Nb de pièces - Stückzahl</p>		<p>2</p>																																																								
<p>Roll n. N.Bobine - Schmelz Nr. 43701541</p>		<p>Thickness Epaisseur - Stärke 12.00 mm</p>		<p>Width Largeur - Breite 1524.00 mm</p>		<p>Net weight Poids net - netto Gewicht 28260 KG</p>																																																								
<p><b>CHEMICAL ANALYSIS - ANALYSE CHIMIQUE - CHEMISCHE ZUSAMMENSETZUNG</b></p> <table border="1"> <thead> <tr> <th></th> <th>C</th> <th>Si</th> <th>Mn</th> <th>Ni</th> <th>Cr</th> <th>Mo</th> <th>Ti</th> <th>N</th> <th>S</th> <th>P</th> </tr> </thead> <tbody> <tr> <td>Required - Exigé %mini</td> <td>0.030</td> <td>0.75</td> <td>2.00</td> <td>10.00</td> <td>16.50</td> <td>2.00</td> <td></td> <td>0.100</td> <td>0.015</td> <td>0.045</td> </tr> <tr> <td>Anforderung. %maxi</td> <td></td> <td></td> <td></td> <td>13.00</td> <td>18.00</td> <td>2.50</td> <td></td> <td>0.046</td> <td>0.002</td> <td>0.034</td> </tr> <tr> <td>Cast Analysis Analyse cotelec</td> <td>0.022</td> <td>0.39</td> <td>1.31</td> <td>10.03</td> <td>16.61</td> <td>2.01</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Analysis Schmelze</td> <td>C74</td> <td>C72</td> <td>C73</td> <td>C74</td> <td>C75</td> <td>C76</td> <td>C77</td> <td>C78</td> <td>C79</td> <td>C80</td> </tr> </tbody> </table>									C	Si	Mn	Ni	Cr	Mo	Ti	N	S	P	Required - Exigé %mini	0.030	0.75	2.00	10.00	16.50	2.00		0.100	0.015	0.045	Anforderung. %maxi				13.00	18.00	2.50		0.046	0.002	0.034	Cast Analysis Analyse cotelec	0.022	0.39	1.31	10.03	16.61	2.01					Analysis Schmelze	C74	C72	C73	C74	C75	C76	C77	C78	C79	C80
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<p>Positive material identification carried out : OK Tests de vérification de la conformité de la nuance fournie : OK Verwechslungsmöglichkeit wurde durchgeführt : OK</p>																																																														
<p><b>MECHANICAL PROPERTIES - PROPRIETES MECANQUES - MECANISCHE WERTE</b> ASTM A370</p> <table border="1"> <thead> <tr> <th>Direction (2)</th> <th>Required Exigé Anforderung</th> <th>Yield or proof strength Limite d'élasticité Dehagnenze</th> <th>Tensile Strength Résistance à la traction Zugfestigkeit</th> <th>Elongation after fracture Allongement après rupt. Bruchdehnung %</th> <th>Hardness Dureté Haerte</th> <th>Test temperature (°C)</th> <th>Tensile str. Résist. MPa Zugfestigkeit</th> <th>Elongation % Allongement Bruchdehnung</th> </tr> </thead> <tbody> <tr> <td>1 T</td> <td>220</td> <td>260</td> <td>510</td> <td>40</td> <td>95</td> <td></td> <td>Rm</td> <td>50mm</td> </tr> <tr> <td>2</td> <td>378</td> <td>406</td> <td>680</td> <td>54</td> <td>85</td> <td></td> <td>Rp1%</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>593</td> <td></td> <td>84</td> <td></td> <td>Rp0.2%</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Rm</td> <td>50mm</td> </tr> </tbody> </table>								Direction (2)	Required Exigé Anforderung	Yield or proof strength Limite d'élasticité Dehagnenze	Tensile Strength Résistance à la traction Zugfestigkeit	Elongation after fracture Allongement après rupt. Bruchdehnung %	Hardness Dureté Haerte	Test temperature (°C)	Tensile str. Résist. MPa Zugfestigkeit	Elongation % Allongement Bruchdehnung	1 T	220	260	510	40	95		Rm	50mm	2	378	406	680	54	85		Rp1%					593		84		Rp0.2%									Rm	50mm										
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# TESTING CERTIFICATE

 <b>HYUN TECH Co., Ltd</b> www.hyun-tech.com	Certificate No. : <b>152379-G04515</b>  Page [ 1 ] of [ 1 ]	 Certified Laboratory by BV Certified ISO 9001 by ABS
68-1, Saebyeok-ro, Sasang-gu, Busan, Korea. Tel : 051-328-0356 / Fax : 051-328-0380		

**1. Client :**

- Name : JU CHAN CORPORATION
- Address : #464-1, Mae-ri, Sangdong-myeon, Gimhae-si, Gyeongsangnam-do, Korea
- Date of Receipt : 2015. 05. 11

**2. Use of Report :** Quality Control

3. Test Sample : ASME SA240 316L (Heat No : 437015)

4. Date of Test : 2015. 05. 18

5. Testing Environment : Temperature ( 22.5 ± 2.5 ) °C , Humidity ( 50 ± 5 ) % R.H.

**6. Test Results :**

Test Name	Unit	Sample	Result	Test Method
Chemical Composition (C)	%	-	0.017	ASTM E1086 - 14
Chemical Composition (Si)	%	-	0.41	ASTM E1086 - 14
Chemical Composition (Mn)	%	-	1.30	ASTM E1086 - 14
Chemical Composition (P)	%	-	0.036	ASTM E1086 - 14
Chemical Composition (S)	%	-	0.002 1	ASTM E1086 - 14
Chemical Composition (Ni)	%	-	10.0	ASTM E1086 - 14
Chemical Composition (Cr)	%	-	16.5	ASTM E1086 - 14
Chemical Composition (Mo)	%	-	2.03	ASTM E1086 - 14
Chemical Composition (N)	%	-	0.048	ASTM E1019 - 11

Affirmation Name : Chang-Hun, Song	Tested by  (Signature)	Technical Manager Name : Bong-Kun, Ma 
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This test report shall be used only within the purpose of its defined usage and also shall not be used for public relation, advertisement.  
 The test result of this test report only limited in the sample and sample name presented by the client and do not guarantee the all products of the client.

2015. 05. 18.

**HYUN TECH Co., Ltd. PRESIDENT**  
  
 (SIGNATURE)

Order No./계약번호 : 01S1669851


PO No./주문번호 : 01S1669851

Supplier /주문자 : POSCO AST

Commodity /품명 : STAINLESS SLAB

Customer /고객사 : POSCO AST CO.,LTD.

Spec & Type /규격 : ASTM-A240M-316L

Size/치수	Product No. /제품번호	Quantity /수량	Weight /중량 (kg)	Heat No. /제강번호	Division	Chemical Composition/화합성분									
						C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	Cu (%)	Mo (%)	N (ppm)
300x1600x5500	SG11243 011	1	24,210	SG11243	L	0.0170	0.560	1.116	0.0230	0.0014	16.317	10.138	0.034	2.083	85
*** Sub Total (020) ***		1	24,210 (kg)												
*** Grade Total ***		1	24,210 (kg)												
*** Grand Total ***		1	24,210 (kg)												
=== Last Item ===															

ORIGINAL  
C O P Y

\* Division - L : Ladle Analysis

We hereby certify that the material herein has been made in accordance with the order and above specification.  
This product is made by fully killed process.  
No repair welding has been performed on the products.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

H.J. Yoo

