



Aperam Stainless Services & Solutions Germany GmbH

Landstraße 27-29
42781 Haan

Tel: 02104 / 2829-700

**TEST REPORT
RELEVÉ DE CONTROLE
WERKSZEUGNIS**

According to / Selon / Gemäß
EN 10204

BL: 0062502 - 1

Date: 11/10/2022

| | |
|---|--|
| Manufact. / Product. /Herstell. APERAM STAINLESS S.ETS.INTERNATIONAL | Item / Article / Produkt 96-311024 |
| Supplier Lot / Lot Fourn. / Band Nr 090572 | SHEETS 4301/4307 2B WITHOUT PAPER 3,0 X 1500,0 X 3000,0 MARK OF GO |
| Heat N° / N° de coulée / Schmelz Nr 224074 | Customer / Client / Kunde OVAKO METALS OY AB |
| Steel Designation / Désignation Acier / Stahlbezeichnung EN 10028-7 WNR 1.4307/1.4301 EN 10088-2 WNR 1.4307/1.4301 ASTM A 240(M) TYPE 304L/304 ASME SA 240 TYPE 304L/304 | Order / Commande / Order 209980263 - 03 |
| | Reference / Référence / Referenz 024249 |

AD 2000 W2 -- AD 2000 W10 -- PED 2014/68/EU

Mill Certificate / N° de Certificats / Prüfzeugnis Nr
2210744184

Chemical Analysis / Analyse Chimique / Chemische Zusammensetzung

| | C | Si | Mn | Ni | Cr | Mo | Ti | N | S | P | Cu | Al | | | | |
|--|-------|------|------|------|-------|----|----|-------|-------|------|----|----|--|--|--|--|
| Cast Analysis Analyse Coulée Analyse | 0,023 | 0,44 | 1,39 | 8,01 | 18,05 | | | 0,069 | 0,001 | 0,04 | | | | | | |

Mechanical Properties / Propriétés Mécaniques / Mechanische Werte EN ISO 6892-1 B


| | Yield strength Limite D'élasticité Dehngrenze MPA | | Tensile strength Résistance à la traction Zugfestigkeit MPA | Elongation after fracture (A) Allongement après rupture Bruchdehnung % | | Hardness Dureté Haerte | |
|--|---|-------|---|--|-------|------------------------------|-----|
| | Rp 0.2 % | Rp 1% | Rm | A5 | 50 mm | HRB | DDQ |
| | 313 | | 646 | | 53 | 87 | |

Material Identification / Identification Matériel / Materialidentifikation

| Lot Nr N° Lot Los Nr | Weight Poids Gewicht | | Lot Nr N° Lot Los Nr | Weight Poids Gewicht | | Lot Nr N° Lot Los Nr | Weight Poids Gewicht | | Lot Nr N° Lot Los Nr | Weight Poids Gewicht |
|----------------------------|----------------------------|--|----------------------------|----------------------------|--|----------------------------|----------------------------|--|----------------------------|----------------------------|
| | Kg | | | Kg | | | Kg | | | Kg |
| T197835 | 1169 | | | | | | | | | |
| T197837 | 1169 | | | | | | | | | |
| T197841 | 1169 | | | | | | | | | |
| T197843 | 1169 | | | | | | | | | |
| T197845 | 1169 | | | | | | | | | |
| T197847 | 1169 | | | | | | | | | |
| T197850 | 1169 | | | | | | | | | |

Number of lots / Nombre de lots / Bundanzahl : 7

Total weight / Poids Total / Gesamt Gewicht [Kg] : 8183

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|--|--|--|---|--|---|--|---|--|--|--|---|--|----------|--|----------|--|----------|--|-----------|--|-----|--|-----|--|-----|--|-----|--|-----|--|
|  Aperam - Stainless France Aperam Isbergues 62330 Isbergues FRANCE | | MILL CERTIFICATE BS EN 10204/3.1 CERTIFICAT DE RECEPTION NF EN 10204/3.1 ABNAHMEPRUEFZEUGNIS DIN EN 10204/3.1 | | | | | | | | | | N-Nr-N 22I0744184-01 V01 | | | | | | | | | | | | | | | | | | | | | |
| | | Ausgestellt im Einvernehmen mit dem TÜV SÜD - Auf Gegenzeichnung wird verzichtet Issued in accordance with TÜV SÜD - Verification is not required Etabli en accord avec le TÜV SÜD - Dispense de contresignature AD 2000 Merkblatt W0 - PED 2014/68 EU Annex I.Point 4.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer's works order number N° de la commande usine productive Werkauftragsnummer 80804858 /01-48807/1 | | Surveyor's mark Cachet de l'expert Stempel des Werkssachverstaendigen UI2 | | Purchaser and/or consignee Client et/ou destinataire Besteller und/oder Empfaenger APERAM SS&S HAAN Aperam Allee 1 42781 Haan ALLEMAGNE | | | | Purchaser's order number N° de commande client Kundenbestellnummer 209893985 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Product - Produit - Erzeugnis COLD-ROLLED COIL BOBINE LAMINEE A FROID KALTGEWALZTES BAND | | Finish Présentation Ausführung 2B 2B 2B 2B 2B | | Steelmaking process Mode d'élaboration de l'acier - Stahlherstellungverfahren Prod.proces: Electric arc furnace - VOD/AOD - Continuous casting Proc.fabric.: Four à arc - VOD/AOD - Coulée continue Fertigungsablauf: Elektro-Ofen - VOD/AOD - Stranggussanlage | | | | Customer article number N.article client Artikelnummer des Kunden ART214199 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Steel designation Désignation de l'acier Stahlbezeichnung EN 10028-7 / 16 - W2-W10 -1.4307 -1.4301 ASTM A 240 / 20 - TYPE 304L -TYPE 304 ASME SA 240 / 21 - TYPE 304L -TYPE 304 EN 10088-2 / 14 - 1.4307 -1.4301 EN 10088-4 / 09 - 1.4307 -1.4301 | | Any supplementary requirements Prescriptions supplémentaires - Zusätzliche Anforderungen | | Product delivery condition Etat de livraison du produit - Lieferzustand Solution annealing Hypertrempe : 1040 C MINI Lösungsglühen | | | | Forced Air Air forcé Gebläse Luft | | | | | | | | | | | | | | | | | | | | | | | | | |
| CORR. TEST:ASTM A 262-E: OK / ASTM A480 / A480M -- ASME SA 480/SA 480M / NACE MR 0175 / ISO 15156-1 / ISO 15156-3 -- NACE MR 0103 / ISO 17945 / ASME-C ODE SECT.2 PART A / CORROSION INTERGRANULAIRE SELON ISO 3651/2 : OK / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Identification of the product Identification du produit - Identifizierung des Erzeugnisses MELTED IN BELGIUM, MADE IN FRANCE | | Dimensions Dimensions - Abmessungen Thickness B09 Epaisseur - Staerke 3,000 mm | | | | | | Width B10 Largeur - Breite 1500,00 mm | | Length B11 Longueur - Laenge | | Number of pieces B08 Nb de pièces - Stueckzahl 1 | | | | | | | | | | | | | | | | | | | | | |
| Coil n. N.Bobine - Band Nr. 90572 | | Heat n. N.Coulée - Schmelz Nr. 224074 | | | | | | | | Net weight B13 Poids net - netto Gewicht 23530 KGS | | | | | | | | | | | | | | | | | | | | | | | |
| CHEMICAL ANALYSIS - ANALYSE CHIMIQUE - CHEMISCHE ZUSAMMENSETZUNG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C | | Si | | Mn | | Ni | | Cr | | Mo | | Ti | | N | | S | | P | | Co | | | | | | | | | | | |
| Required -Exigé %mini Anforderung. %maxi | | 0,030 | | 0,75 | | 2,00 | | 8,00 10,50 | | 18,00 19,50 | | | | | | 0,100 | | 0,0150 | | 0,045 | | | | | | | | | | | | | |
| Cast Analysis Analyse coulée Analyse Schmelze | | 0,023 | | 0,44 | | 1,39 | | 8,01 | | 18,05 | | | | | | 0,069 | | 0,0010 | | 0,040 | | 0,167 | | | | | | | | | | | |
| | | C71 | | C72 | | C73 | | C74 | | C75 | | C76 | | C77 | | C78 | | C79 | | C80 | | C81 | | C82 | | C83 | | C84 | | C85 | | C86 | |
| Positive material identification carried out : OK Tests de vérification de la conformité de la nuance fournie : OK Verwechslungsprüfung wurde durchgeführt : OK | | | | | | | | | | | | | | D52 | | | | | | | | | | | | | | | | | | | |
| Location (1) | | MECHANICAL PROPERTIES - PROPRIETES MECANIQUES - MECHANISCHE WERTE ISO 6892-1 B / A-SA 370 | | | | | | | | | | C20 | | | | | | | | | | | | | | | | | | | | | |
| | | Room temperature - Température ambiante - Raumtemperatur | | | | | | | | | | C03 | | | | | | | | | | | | | | | | | | | | | |
| Direction (2) | | Yield or proof strength Limite d'élasticité Dehngrenze MPa | | Tensile Strength Résistance à la traction Zugfestigkeit MPa | | Elongation after fracture Allongement après rupt. Bruchdehnung % | | Hardness Dureté Haerte | | Yield or proof strength Limite d'élasticité Dehngrenze MPa | | Tensile str. Résist. MPa Zugfestigkeit | | Elongation % Allongement. Bruchdehnung | | | | | | | | | | | | | | | | | | | |
| | | Required Exigé Anforderung | | Rp0.2% Rp1% | | Rm | | 50mm 5,65 HRBW | | Rp0.2% Rp1% Rm | | Rm | | | | | | | | | | | | | | | | | | | | | |
| 1 T | | mini maxi | | 230 260 | | 540 700 | | 40 45 92 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 T | | Obtained Obtenu Ergebnisse | | 313 353 | | 646 | | 53 56 87 88 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C11 | | C14 | | C12 | | C13 | | C15 | | C31 | | C16 | | C17 | | C18 | | C19 | | | | | | | | | | | | | |
| Impact strength test Essai de résilience Kerbschlagzähigkeitstest | | C40 | | C44 | | C42 | | C41 | | C43 | | C45 | | C46 | | C47 | | C48 | | C49 | | | | | | | | | | | | | |
| | | t(°c) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Location of the sample (1) Emplacement de l'échantillon Lage des Probenabschnittes 1. Front - Début - Anfang 2. Back - Fin - Ende 3. Middle - Milieu - Mitte | | The delivery is in accordance with the order La fourniture est conforme aux exigences de la commande Die lieferung entspricht den Bestellbedingungen | | | | Z01 | | Organisation inspection Organisme et/ou service contrôle Ueberwachungsabteilung | | | | A05 | | | | | | | | | | | | | | | | | | | | | |
| | | Packing list Avis d'expédition Lieferscheinnummer 220926I01470-102381 | | | | A10 | | Quality Control 26/09/2022 Laurent DUBOIS | | | | | | | | | | | | | | | | | | | | | | | | | |
| Direction of the test pieces (2) Orientation des éprouvettes Probenrichtung T. Transverse - Travers - Quer L. Longitudinal - Long - Laengs | | Marking, inspection and measurement : without objection Contrôle de marquage, d'aspect et de dimensions : satisfaisants Pruefung der Stempelung, des Oberflaechenaspekts und der Abmessungen : ohne Beanstandung | | | | D01 | | The inspector Le responsable Der Werkssachverstaendige | | | | Z02 | | | | | | | | | | | | | | | | | | | | | |