# wenzhou Shengzhong Petrochemical Equipment Co.,ltd

## MILL TEST CERTIFICATE REPORT

NO.2888,Ruifeng Road(Taoshan Area),Taoshan Town,Ruian City Zhejiang Province,P.R.China

DATE:2024.10.14

CLIENT :JC fabrica de valvulas,s.a. ISO 9001 / approved CE 2014/68/EU / approved MAT. CERT. Nº: SZ2024101402

| PO No.: | 565-35 | PO DATE : | 2024.8.16 | Tensile Test bar | Dimension (mm) | Section ($mm^2$) | Length (mm) | Testing Temperature (℃) | Brinell Hardness | Load (Kg.f) | Location | Impact Test | Impact block size (mm) | Impact direction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material Specification | EN 10213:2016 (DIN 17.245) Grade : GP240GH (1.0619) | Certificate type | DIN 50049 – EN 10204 – 3.1 | Actual | 10 | 122.7185 | 50 | room temp | Actual | 3000 | surface | -29℃ | 10*10*50 | transverse |

| COMPONENT | 5161501001V1 | | |
|---|---|---|---|
| DWG/PATERN N° | 0516150MC Rev.6 | | |
| NAME:BODY | DN-150 PN-16 | | |
| Heat Treatment | Temp(℃) | Time (h) | Cooling Method |
| Normalizing | 900℃ | 2.5-3h | air cooling |

| Heat No. | Qty. | | | | Ingot casting | | Mn | S | P | Si | Cr | Ni | Mo | Cu | V | | | YS | UTS | EL | ROA | Hardness | | No. 1 | No. 2 | No. 3 | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | sample | ` | | | | | | | | | | | | | | | | | | | | |
| | | | | | | % | | | | | | | | | | | | (Mpa) | (Mpa) | (%) | (%) | (HBW) | AVG. | | | | |
| | | | | Min | | | 0.18 | 0.50 | | | | | | | | | | 240 | 420 | 22 | | | | | | | (℃) |
| | | | | Max | | | 0.23 | 1.20 | 0.020 | 0.030 | 0.60 | 0.30 | 0.40 | 0.12 | 0.30 | 0.03 | | | 600 | | | | | | | | |
| 3D164 | 1 | | | | | | 0.198 | 0.966 | 0.008 | 0.014 | 0.433 | 0.035 | 0.008 | 0.002 | 0.083 | 0.001 | | 374 | 548 | 31 | 60 | 171-171-172 | 171 | 42 | 43 | 51 | -29 |
| 3G120 | 4 | | | | | | 0.186 | 0.913 | 0.009 | 0.014 | 0.498 | 0.048 | 0.010 | 0.001 | 0.013 | 0.001 | | 354 | 546 | 29 | 58 | 171-170-172 | 171 | 38 | 44 | 47 | -29 |
| 3G122 | 5 | | | | | | 0.210 | 0.953 | 0.011 | 0.015 | 0.489 | 0.078 | 0.020 | 0.004 | 0.016 | 0.001 | | 348 | 538 | 31 | 59 | 172-172-171 | 172 | 46 | 48 | 49 | -29 |
| 3G124 | 2 | | | | | | 0.201 | 0.918 | 0.008 | 0.013 | 0.468 | 0.041 | 0.009 | 0.001 | 0.014 | 0.001 | | 350 | 535 | 30 | 57 | 171-171-172 | 171 | 40 | 46 | 48 | -29 |
| 3G214 | 1 | | | | | | 0.215 | 0.824 | 0.007 | 0.015 | 0.448 | 0.030 | 0.010 | 0.002 | 0.018 | 0.001 | | 358 | 552 | 32 | 62 | 168-169-167 | 168 | 45 | 45 | 52 | -29 |
| 3G216 | 1 | | | | | | 0.216 | 0.887 | 0.006 | 0.013 | 0.490 | 0.022 | 0.009 | 0.001 | 0.017 | 0.001 | | 352 | 540 | 30 | 64 | 169-169-168 | 169 | 42 | 49 | 51 | -29 |
| 3H080 | 1 | | | | | | 0.217 | 0.928 | 0.007 | 0.013 | 0.489 | 0.069 | 0.015 | 0.004 | 0.079 | 0.001 | | 346 | 545 | 29 | 59 | 168-168-169 | 168 | 42 | 43 | 51 | -29 |
| 3H082 | 3 | | | | | | 0.198 | 0.974 | 0.007 | 0.012 | 0.503 | 0.067 | 0.011 | 0.001 | 0.034 | 0.001 | | 375 | 572 | 32 | 62 | 169-169-168 | 169 | 38 | 44 | 52 | -29 |
| 3H086 | 2 | | | | | | 0.217 | 0.945 | 0.008 | 0.014 | 0.448 | 0.044 | 0.008 | 0.002 | 0.033 | 0.001 | | 368 | 565 | 31 | 63 | 174-174-173 | 174 | 38 | 46 | 54 | -29 |
| 3H088 | 3 | | | | | | 0.193 | 1.078 | 0.008 | 0.014 | 0.419 | 0.040 | 0.008 | 0.002 | 0.036 | 0.001 | | 374 | 562 | 28.5 | 62 | 172-172-171 | 172 | 39 | 45 | 52 | -29 |

Mechanical Properties | Impact Test: Energy value (J) min 27J

1.-Visual inspection:accepted according to PSO4/I1 Rev 9.Other information:no major repairs carried out.
2.-We certify that the above material has been manufactured and processed according to requirement of the above P.O.
3-These supply materials are in accordance with NACE MR 01-75/ISO 15156 and NACE MR 01-03/ISO 17945.

温州盛中石化装备有限公司 质量部

Authorised Inspector's Name, Signature & Date: 黄据科 2024.10.14 HUANG JU KE

Engineer Q.A's Name, Signature & Date: 黄晓清 2024.10.14 HUANG XIAO QING

Laboratory Incharge's name , Signature & Date: 胡兴廷 2024.10.14 HU XING TING