

**SUPPLIER:** JC SHANGHAI

**P.O N°:** 346933

**MATERIAL CERT. N°:** SH042317

**ISO 9001:** APPROVED

**DATE:** 28.10.2021

**DATE:** 09.02.2022

**2014/68/EU:** APPROVED

**REVISION:** 1

**CERTIFICATION:** BS EN ISO 10204 – 3.1

**ITEM CODE:** C0515AIT

**DRAWING N°:** ¾"

**COMPONENT:** BODY

**SIZE:** ¾"

**CLASS:** 800#

**MATERIAL SPECIFICATION:** A182 Gr. F51 Ed. 21

**HEAT TREATMENT:** SOLUTION 1040°C x 4H + WATER COOLING

**HEAT N°:** 25757

**QTY:** 97

## CHEMICAL ANALYSIS

PARAMETER	MIN	MAX	ACT.
CARBON (C)	0.001	0.101	
MANGANESE (MN)	0.23	0.33	
SILICON (SI)	0.5	0.6	
SULPHUR (S)	0.8	0.9	
PHOSPHOROUS (P)	0.002	0.102	
CHROMIUM (CR)	13.5	13.6	
MOLYBDENUM (MO)	4.3	4.4	
NICKEL (NI)	8.1	8.2	
TITANIUM (TI)	0.001	0.101	
COBALT (CO)	-	-	
VANADIUM (V)	-	-	
CARBON EQUIVALENT (CE)	0.38	0.48	
NITROGEN (N)	-	-	
COPPER (CU)	-	-	
IRON (FE)	-	-	
TUNGSTEN (W)	-	-	
PREN	-	-	
COLUMBIUM + TANTALUM (CB + TA)	-	-	

## MECHANICAL PROPERTIES

PARAMETER	UNITS	MIN	MAX	ACT.	AVJ
TENSILE (UTS)	Mpa	450	-	180	-
YIELD (YS)	Mpa	850	-	990	-
ELONGATION (E)	%	30	-	32	-
REDUCTION AREA (RA)	%	18	-	23	-
HARDNESS	HB	150	180	180-200-300	160
IMPACT TEST @ - 190°C	JOULES	-	20	50-70-90	50

## REMARKS

- 1.- Visual inspection: accepted according PS04/I1 JC IT. 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.- The results above indicated are exact transcription from the corresponding certificates, which are filed in our factory, issued by our homologated suppliers.
- 4.- In accordance with NACE MR0175/ISO15156 & NACE MR0103/ISO17945

(x)Visual Inspection:

Casting: MSS-SP55 and PS04/I1 JC IT

Forging: Material Standard applicable and PS04/I1 JC IT