



Procedure Qualification Record (PQR)

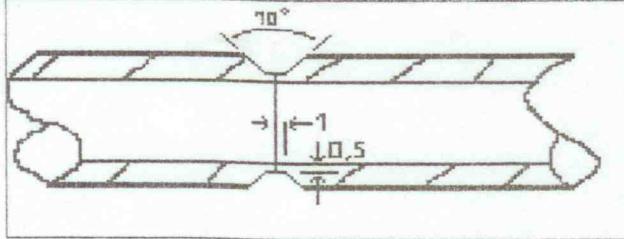
PROCEDURE QUALIFICATION RECORD NO. 390 DATE 16/09/93

WPS No. 390/1

Welding Process(es) GTAW

Types (Manual, Automatic, Semi-Auto.) MANUAL

JOINTS (QW-402)



Groove Design Used

BASE METALS (QW-403)

Material Spec. ASTM B337 - 83
Type or Grade GR.2
P No. 51 to P No. 51
Thickness 2,77
Diameter 33,4
Other

POSTWELD HEAT TREATMENT(QW-407)

Temperature /
Time /
Other

GAS (QW-408)

Type of Gas or Gasses ARGON
Composition of Gas Mixture ARGON 99,99%
Other

FILLER METALS (QW-404)

Weld Metal Analysis A No. /
Size of Electrode 1,6 mm
Filler Metal F No. 51
SFA Specification 5.16
AWS Classification ERTi-2
Other

ELECTRICAL CHARACTER. (QW-409)

Current DIRECT
Polarity STRAIGHT
Amps. 70 - 100 Volts 12 - 16
Other

POSITION (QW-405)

Position of Groove 1G
Weld Progression (Uphill, Downhill) /
Other

TECHNIQUE (QW-410)

Travel Speed /
String or Weave Bead STRING
Oscillation N.A.
Multipass or Single Pass (per side) MULTIPASS
Single or Multiple Electrodes SINGLE
Other

PREHEAT (QW-406)

Preheat Temp. N.A.
Interpass Temp. /
Other



Signed G. Renier

Handwritten signature

1st OCT, 1993

Procedure Qualification Record (PQR) (Cont'd)
TENSILE TEST (QW-150)

SPECIMEN No.	WIDTH Inches mm	THICKNESS Inches mm	AREA Square Inches mm	ULTIMATE TOT. LOAD ØB - N	ULTIMATE UNIT STRESS PSI - N/mm2	CHARACT. FAILURE & LOCATION
1	12,7	3,3	41,9	20500	489	Ductile in base material
2	12,6	3,3	41,5	20600	496	Ductile in base material

GUIDED BEND TESTS (QW-160)

TYPE and Figure No.	Result
FACE (QW-462.1) (b)	SATISFACTORY
FACE (QW-462.1) (b)	SATISFACTORY
ROOT (QW-462.1) (b)	SATISFACTORY
ROOT (QW-462.1) (b)	SATISFACTORY

TOUGHNESS TESTS (QW-170)

SPECIMEN No.	NOTCH LOCATION	NOTCH TYPE	TEST. TEMP.	IMPACT VALUES	LATERAL EXP.		DROP WEIGHT	
					% SHEAR	BREAK	MILS	NO BREAK

Fillet Weld Test (QW-170)

Result - Satisfactory : No Penetration Into Metal : No

Macro Results _____

Other Tests

Type of Test RADIOGRAPHIC EXAMINATION - SATISFACTORY

Deposit Analysis _____

Other _____

Welder's Name PIPPO CAPPADONA Clock No. 14 Stamp No. 1

Tests conducted by : IRTEC Laboratory Test No. 33329

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Date 15 OCT, 1993


Signed G. Renier

Manufacturer
By _____

COMEPRE s.r.l.

(Detail of record of tests are illustrative only and may be modified to conform to the type and number of tests required by the Code)