



KAILCO INTERNATIONAL

Plot No.149, Sector-2, Pocket-L, DSIDC Industrial Area, Bawana,
North West Delhi, Delhi-110039

WELDING PROCEDURE SPECIFICATION (WPS)

Ref. (Section IX, ASME Boiler and Pressure Vessels Code)

Dated

Company Name:- **KAILCO INTERNATIONAL**

WPS NO. : **KAILCO/WPS/01 Rev 0**

Dated : 24.04.2024

Supporting PQR NO. : **KAILCO/PQR/01 Rev 0**

Dated : 24.04.2024

Welding Process : **GTAW**

Types : **Manual**

JOINTS (QW - 402)

Joint Design (QW402.1) : **Single V**

Backing (QW402.4) : **NO**

Backing Material (Type) : **NIL - Backing Gas Argon for GTAW Process 99.90%**

BASE METAL (QW - 403)

P.No.:- **8** Group No.:- **1** to P. No. **8** Group No. **1**

OR

Specification Type & Grade: **ASTM A 249 Gr. 304 / 304L**

to Specification Type & Grade: **ASTM A 249 Gr. 304 / 304L**

OR

Chemical Analysis & Mechanical Analysis: **N.A.**

TO

Chemical Analysis & Mechanical Analysis: **N.A.**

Thickness Range (QW451.1) :

Base Metal : Groove: **0.8 to 1.6 mm (max.)**

Fillet :

All fillet sizes on all base metal thickness and on all diameters.

Pipe Dia Range: 15.88 MM To Groove: **N.A.**

Unlimited

Maximum Pass Thickness $\leq \frac{1}{2}$ Inch (13MM) : **YES**

Filler Metal (QW - 404)

Process	:	GTAW
Weld Layer(s)	:	All
Specification No.	:	ER 308L
AWS NO. (Class)	:	SFA 5.9 ER 304
F. No.	:	6
A. No.	:	8
Size of Filler Metals	:	Ø 2.4 m.m.
Weld Metal Thickness Range :	:	
Groove	:	0.8 MM - 1.6 m.m (Max.)
Fillet	:	All Size
Electrode Flux (Class)	:	N.A.
Flux - Trade Name	:	N.A.
Consumable Insert	:	N.A.
Filler Metal Product Form	:	Solid Wire
Others	:	

POSITION (QW - 405)

Position of Groove: **Any**

Welding Progression: **Uphill or Downhill**

Position of Fillet: **All**

POST WELD HEAT TREATMENT (QW - 407)

Loading Temp. **NA**

Heating Rate. **NA**

Soaking Temp. **NA**

Soaking Time **NA**

Cooling Media **NA**

Batch No. **NA**





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PREHEAT (QW - 406)Preheat Temp. (Min) : **Ambient**Interpass Temp. (Max) : **180 °C**Preheat Maintenance **NA****GAS (QW - 408) for GTAW****Percent Composition**

	Gas	Mixture	Flow Rate
Shielding	Argon	99.90%	10 LPM
Trailing	-	-	-
Backing (Purging)	Argon	99.90%	10 LPM

ELECTRICAL CHARACTERISTIC (QW-409)Current : **As per table**Amps (Range) : **As per table**Polarity : **As per table**Volts (Range) : **As per table**Tungsten Electrode size & type : **EWTH 2 : DIA 2.4 MM**Mode of Metal Transfer for GMAW : **N.A.****TECHNIQUE (QW-410)**String or Weave Bead : **Stringer**Orifice or Gas Cup Size : **Ø 6 MM.**Initial & Inter pass cleaning (Brushing & Grinding) : **Chipping, Wire Brushing & Grinding**Method of Back Gouging : **Grinding**Oscillation : **N.A.**Contract Tube to work Distance : **N.A.**Multiple or Single pass (per side):- **Single**Multiple or Single Electrode : **Single**Travel Speed Range : **As per Table**Peening : **Not permitted**Others : **Nil**

Weld Layers	Process	Filler Metal		Current		Volts Range	Travel Speed In mm/min.	Heat Input KJ/mm (Max.)
		Class	Dia	Type Polarity	Amp Range			
Root	GTAW	ER 308L	Ø 2.40 mm	DCEN	75-90	09-13.	70-80	0.877

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

Authorized Signature
KAILCO INTERNATIONAL

