

LANL BPS/WPS Designation	AWS Desig.	Process	P/M/S Number				Base Material		Qual. Thickness		Qual. Pos.	Qual. Dia.	Qual. F-No	Progress	PWHT	Backing	Remarks	ANSI Piping Codes					
			P #	Group	P #	Group	1st	2nd	Min.	Max.								B31.1	B31.2	B31.3	B31.4	B31.5	B31.8
1000-0001-1	B2.1-1-001-06	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1870	0.7500	All	N/A	F4	Up	As-welded	With backing	No	Yes	Yes	Yes	Yes	If	
1000-0011-1	B2.1-1-011-02*	SMAW	1	1	1	1	Gal. CS Sheet	Gal. CS Sheet	0.0516	0.1382	All	N/A	F3	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	Yes	Yes	Yes	Yes	If
1000-0012-1	B2.1-1-012-02	SMAW	1	1	1	1	CS Sheet	CS Sheet	0.0478	0.1345	All	N/A	F3	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	Yes	Yes	Yes	Yes	If
1000-0016-1	B2.1-1-016-05	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	1" Min.	F4	Up	Both	With backing		Yes	Yes	Yes	Yes	Yes	Yes
1000-0017-1	B2.1-1-017-05	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	1" Min.	F3	Up	Both	With/without backing		Yes	Yes	Yes	Yes	Yes	Yes
1000-0022-1	B2.1-1-022-05	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	1" Min.	F3 & F4	Up	Both	With/without backing		Yes	Yes	Yes	Yes	Yes	Yes
1000-0023-1	B2.1-1-026-05	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	1" Min.	F3 & F4	Down-Up	Both	With/without backing		Yes	Yes	Yes	Yes	Yes	Yes
1000-0201-1	B2.1-1-201-07	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	0.7500	All	1" Min.	F3 & F4	Up	As Welded	With/without backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
1000-0202-1	B2.1-1-202-07	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	0.7500	All	1" Min.	F3 & F4	Down-Up	As Welded	With/without backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
1000-0203-1	B2.1-1-203-07	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	0.7500	All	1" Min.	F3 & F4	Up	As Welded	With/without backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
1000-0204-1	B2.1-1-204-07	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	0.7500	All	1" Min.	F3	Down-Up	As Welded	With/without backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
1000-0205-1	B2.1-1-205-07	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	1" Min.	F3 & F4	Up	Both	With/without backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
1000-0206-1	B2.1-1-206-07	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	1" Min.	F3 & F4	Down-Up	Both	With/without backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
1000-0208-1	B2.1-1-208-07	SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	1" Min.	F4	Up	Both	With backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
1000-0218-1/4	B2.1-4-218-99	SMAW	4	1 or 2	4	1 or 2	Alloy Steel	Alloy Steel	0.1250	1.5000	All	≥ 0.750" Nom.	F4	Up	Both	With backing	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
1000-0223-1/5A	B2.1-5A-223-99	SMAW	5A	All	5A	All	Alloy Steel	Alloy Steel	0.1250	1.5000	All	≥ 0.750" Nom.	F4	Up	Both	With backing	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
1000-0013-8	B2.1-8-013-02	SMAW	8	All	8	All	SS Sheet	SS Sheet	0.0500	0.1405	All	N/A	F5	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	N/A	Yes	N/A	N/A	If
1000-0014-1/8	B2.1-1-8-014-02	SMAW	1	1	8	1	CS Sheet	SS Sheet	0.0478	0.1405	All	N/A	F5	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	Yes	Yes	Yes	Yes	If
1000-0023-8	B2.1-8-023-05	SMAW	8	1	8	1	SS	SS	0.1250	1.5000	All	1" Min.	F5	Up	As Welded	With/without backing		Yes	Yes	Yes	Yes	Yes	Yes
1000-0213-8	B2.1-1-8-213-07	SMAW	8	1	8	1	SS	SS	0.1250	1.5000	All	≥ 0.750" Nom.	F5	Up	As Welded	With Backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
1000-0228-1/8	B2.1-1-8-228-02	SMAW	1	1 or 2	8	1	CS	SS	0.1250	1.5000	All	≥ 0.750" Nom.	F5	Up	As-welded	With backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010-0002-1	B2.1-1-002-06*	GTAW	1	1 or 2	1	1 or 2	CS	CS	0.1870	0.8750	All	N/A	F6	Up-Down	As-welded	With/without backing		No	Yes	Yes	Yes	Yes	If
2010-0007-1	B2.1-1-007-02	GTAW	1	1	1	1	Gal. CS Sheet	Gal. CS Sheet	0.0516	0.1382	All	N/A	F6	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	Yes	Yes	Yes	Yes	If
2010-0008-1	B2.1-1-008-02	GTAW	1	1	1	1	CS Sheet	CS Sheet	0.0478	0.1345	All	N/A	F6	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	Yes	Yes	Yes	Yes	If
2010-0207-1	B2.1-1-207-07	GTAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	All	F6	Up	Both	With/without backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010-0210-1	B2.1-1-210-01	GTAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	All	F6	Up	Both	Consumable insert	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010-0217-1/4	B2.1-4-217-99	GTAW	4	1 or 2	4	1 or 2	Alloy Steel	Alloy Steel	0.1250	0.7500	All	All	F6	Up	Both	With/without backing	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
2010-0220-1/4	B2.1-4-220-99*	GTAW	4	1 or 2	4	1 or 2	Alloy Steel	Alloy Steel	0.1250	0.7500	All	All	F6	Up	Both	Consumable insert	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
2010-0222-1/5A	B2.1-5A-222-99	GTAW	5A	All	5A	All	Alloy Steel	Alloy Steel	0.1250	0.7500	All	All	F6	Up	Both	With/without backing	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
2010-0225-1/5A	B2.1-5A-225-99	GTAW	5A	All	5A	All	Alloy Steel	Alloy Steel	0.1250	0.7500	All	All	F6	Up	Both	Consumable insert	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
2010-0010-1/8	B2.1-1-8-010-02	GTAW	1	1	8	1	CS Sheet	SS Sheet	0.0478	0.1405	All	N/A	F6	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	Yes	Yes	Yes	Yes	If
2010-0227-1/8	B2.1-1-8-227-02	GTAW	1	1 or 2	8	1	CS	SS	0.0625	1.5000	All	All	F6	Up	As-welded	Purge/with Backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010-0230-1/8	B2.1-1-8-230-02	GTAW	1	1 or 2	8	1	CS	SS	0.0625	1.5000	All	All	F6	Up	As-welded	Consumable insert	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010-0009-8	B2.1-8-009-02	GTAW	8	All	8	All	SS Sheet	SS Sheet	0.0500	0.1405	All	N/A	F6	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	N/A	Yes	N/A	N/A	If
2010-0024-8	B2.1-8-024-01	GTAW	8	1	8	1	SS	SS	0.0625	1.5000	All	All	F6	Up	As Welded	Purge/with Backing	Primarily Structural	Yes	Yes	Yes	Yes	Yes	Yes
2010-0212-8	B2.1-8-212-01	GTAW	8	1	8	1	SS	SS	0.0625	1.5000	All	All	F6	Up	As Welded	Purge/with Backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010-0215-8	B2.1-8-215-01	GTAW	8	1	8	1	SS	SS	0.1250	1.5000	All	All	F6	Up	As-welded	Consumable insert	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010-0015-22	B2.1-22-015-02	GTAW	22	All	22	All	AL Sheet	AL Sheet	0.0400	0.1010	All	N/A	F23	Up	As-welded	With/without backing	18 Ga - 10 Ga	No	Yes	Yes	Yes	Yes	If
2010/1000-0021-1	B2.1-1-021-05	GTAW/SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	1" Min.	F6 & F4	Up	Both	With/without backing		Yes	Yes	Yes	Yes	Yes	Yes
2010/1000-0209-1	B2.1-1-209-07	GTAW/SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	All	F6 & F4	Up	Both	With/without backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010/1000-0211-1	B2.1-1-211-01	GTAW/SMAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	All	F6 & F4	Up	Both	Consumable insert	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010/1000-0219-1/4	B2.1-4-219-99	GTAW/SMAW	4	1 or 2	4	1 or 2	Alloy Steel	Alloy Steel	0.1250	1.5000	All	≥ 0.750" Nom.	F6 & F4	Up	Both	With/without backing	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
2010/1000-0221-1/4	B2.1-4-221-99	GTAW/SMAW	4	1 or 2	4	1 or 2	Alloy Steel	Alloy Steel	0.1250	1.5000	All	≥ 0.750" Nom.	F6 & F4	Up	Both	Consumable insert	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
2010/1000-0224-1/5A	B2.1-5A-224-99	GTAW/SMAW	5A	All	5A	All	Alloy Steel	Alloy Steel	0.1250	1.5000	All	≥ 0.750" Nom.	F6 & F4	Up	Both	With/without backing	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
2010/1000-0226-1/5A	B2.1-5A-226-99	GTAW/SMAW	5A	All	5A	All	Alloy Steel	Alloy Steel	0.1250	1.5000	All	≥ 0.750" Nom.	F6 & F4	Up	Both	Consumable insert	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
2010/1000-0229-1/8	B2.1-1-8-229-02	GTAW/SMAW	1	1 or 2	8	1	CS	SS	0.1250	1.5000	All	≥ 0.750" Nom.	F6 & F5	Up	As-welded	Purge/with Backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010/1000-0231-1/8	B2.1-1-8-231-02	GTAW/SMAW	1	1 or 2	8	1	CS	SS	0.1250	1.5000	All	≥ 0.750" Nom.	F6 & F5	Up	As-welded	Consumable insert	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010/1000-0025-8	B2.1-8-025-01	GTAW/SMAW	8	1	8	1	SS	SS	0.1250	1.5000	All	≥ 1.0" Nom.	F6 & F5	Up	As Welded	With/without backing	Primarily Structural	Yes	Yes	Yes	Yes	Yes	Yes
2010/1000-0214-8	B2.1-8-214-01	GTAW/SMAW	8	1	8	1	SS	SS	0.1250	1.5000	All	≥ 0.750" Nom.	F6 & F5	Up	As Welded	Purge/with Backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
2010/1000-0216-8	B2.1-8-216-01	GTAW/SMAW	8	1	8	1	SS	SS	0.1250	1.5000	All	≥ 0.750" Nom.	F6 & F5	Up	As-welded	Consumable insert	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
3002-0235-1	B2.1-1-235-06	GMAW-S - Ar/O2	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	Flat	≥ 2.875" OD	F6	N/A	Both	With backing	Primarily Pipe	Yes	Yes	Yes	Yes	Yes	Yes
3002/3502-0232-1	B2.1-1-232-06	GMAW-SC/FCAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	≥ 2.875" OD	F6	Up	Both	With/without backing	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
3003-0003-1	B2.1-1-003-02	GMAW-SC-Ar/CO2	1	1	1	1	Gal. CS Sheet	Gal. CS Sheet	0.0516	0.1382	All	N/A	F6	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	Yes	Yes	Yes	Yes	If
3003-0004-1	B2.1-1-004-02	GMAW-SC	1	1	1	1	CS Sheet	CS Sheet	0.0478	0.1345	All	N/A	F6	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	Yes	Yes	Yes	Yes	If
3003/3002-0233-1	B2.1-1-233-06	GMAW-SC/GMAW-S	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All	≥ 2.875" OD	F6	Up-Down	Both	With/without backing	Primarily Pipe	No	Yes	Yes	Yes	Yes	If
3006-0006-1/8	B2.1-1-8-006-02	GMAW-SC	1	1	8	1	CS Sheet	SS Sheet	0.0478	0.1405	All	N/A	F6	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	Yes	Yes	Yes	Yes	If
3006-0005-1/8	B2.1-8-005-04	GMAW-SC	8	All	8	All	SS Sheet	SS Sheet	0.0500	0.1405	All	N/A	F6	Up-Down	As-welded	With/without backing	18 Ga - 10 Ga	No	N/A	Yes	N/A	N/A	If
3500-0018-1	B2.1-1-018-05	FCAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All (E71T-8)	4" Min.	F6	Up	As-Welded	With backing		No	Yes	Yes	Yes	Yes	If
3500-0027-1	B2.1-1-027-98	FCAW	1	1 or 2	1	1 or 2	CS	CS	0.1250	0.5000	All (E71T-11)	4" Min.	F6	Up-Down	As Welded	With backing		No	Yes	Yes	Yes	Yes	If
3501-0019-1	B2.1-1-019-05	FCAW - CO2	1	1 or 2	1	1 or 2	CS	CS	0.1250	1.5000	All (E71T-1)	4" Min.	F6	Up	As-Welded	With backing		Yes	Yes	Yes	Yes	Yes	Yes
3503-0020-1	B2.1-1-020-05	FCAW - Ar/CO2	1	1 or 2	1	1 or 2	CS	CS															

