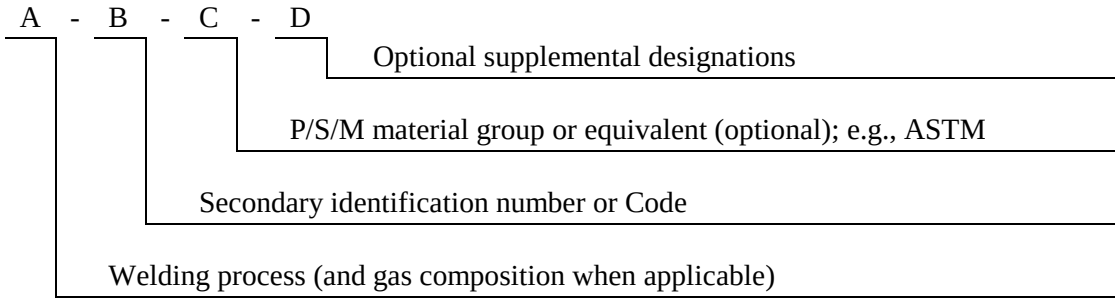
BPS/WPS DESIGNATION CODES AND NOMENCLATURE

1. The numbering of typical WPSs has up to four segments in a string as shown below:



2. The first segment in the string, "A", designates the welding, brazing, or bonding process per the listings below. Shield gas composition is shown by the last two digits when applicable. Combination welding processes and material are indicated by the slash (/) symbol (e.g., WPS 2010/3010). Thus:

1000	SMAW	Shielded Metal Arc Welding
20XX	GTAW	Gas Tungsten Arc Welding
30XX	GMAW	Gas Metal Arc Welding
35XX	FCAW	Flux Core Arc Welding
40XX	PAW	Plasma Arc Welding
5000	SAW	Submerged Arc Welding
6000	OFW/TB	Oxyfuel Welding/Torch Brazing
7000	TF	Thermal Fusion – Plastic
8000	CAW	Carbon Arc Welding
9000	STUD	Automatically Timed Arc
10000	SC	Solvent Cement Bonding

Shield Gas Required (XX in above designations):

00	No Gas Shielding (SMAW/SAW/OFW/TF/STUD/CAW)
01	CO2 100%
02	Argon 98% / Oxygen 2%
03	Argon 75% / CO2 25%
04	Argon 71% / Helium 25% / CO2 4%
05	Argon 79% / Helium 18% / CO2 3%
06	Helium 90% / Argon 7.5% / CO2 2.5%
07	Helium 100%
08	Argon 90% / Helium 10%
09	Argon 99% / Oxygen 1%
10	100% Argon (GTAW/GMAW/PAW)
11	Argon 95% / CO2 5%
12	Argon 75% / CO2 20% / Oxygen 5%
13	Helium 80% / Argon 20%
14	Argon 75%/Helium 25%
15	Helium 75% / Argon 25%

3. Segment "B" in the string represents AWS standard WPS number, or Codes or other identification:

Secondary Identification	Examples	Notes
Codes or Standards	API D1.3	
Program Reference	3013 Internal can vs. External can	
AWS Standard WPS index numbers	0204	
LANL Legacy WPSs	XXXX	Over time these will be replaced by Code or standard numbers

4. Segment "C" in the string are the assigned P/S/M Number for weldability of material groups as reflected in ASME Sec IX, AWS B2.0, ASME B31.X, and other Codes or standards:

Base Metal	Welding P, M, or S No.	Brazing P, M, or S No.
Steel and alloy steels	P-No. 1 through P-No. 11 incl. P-No. 5A, 5B, and 5C	P-No. 101 through P-No. 103
Aluminum and aluminum-base alloys	P-No. 21 through P-No. 25	P-No. 104 and P-No. 105
Copper and copper-base alloys	P-No. 31 through 35	P-No. 107and P-No. 108
Nickel and nickel-base alloys	P-No. 41 through 47	P-No. 110 through P-No. 112
Titanium and titanium-base alloys	P-No. 51 through P-No. 53	P-No. 115
Zirconium and Zirconium-base alloys	P-No. 61 through P-No. 62	P-No. 117

5. Segment "D" in the string are supplemental designations that may be present and include:

A	automatic machine welding
AC	alternating current
C	cast iron base materials
DC	direct current
Fxxx	Filler material Group or F-number (e.g., WPS 2010-1-F32 requires ERCuSi filler; 6000-107-F102 requires BAg-x brazing filler
NF	Nitrogen Purge
P	pulsed
PPE	polypropylene base material
PVC	polyvinylchloride base material
PVDF	polyvinylidene fluoride base material
REBAR	reinforcing steel for concrete structures
SC	short circuit transfer
SP	spray transfer

5. Many WPSs are developed for multiple code use (i.e., ASME and AWS); refer to WPS 3-01 for guidance.
6. For welding to American Petroleum Institute Standard 1104, the WPSs are preceded by "API-" and also use a sequential number for uniqueness, thus WPS API-1000-1, API-1000-2, etc.