

Table 2 — Personal Breathing Zone Air Sampling Data on Hexavalent Chromium for Welding, Cutting and Gouging Processes

Sample	Area Type	Process	Base Metal	Filler Metal	OSHA Method 215 Cr VI TWA $\mu\text{g}/\text{m}^3$	Total Fume (TF) TWA $\mu\text{g}/\text{m}^3$	Ventilation
16769	E	SMAW	High Tensile Steel	7018-M	0.1	1141	Nat. Dil.
16853	O	SMAW	HY 100	11018 MR	0.1	464	LEV (2)
16888	O	SMAW	HY 100	11018 MR	0	131	LEV (2)
16827	E	SMAW	HY 100	12018-M2	1	7930	LEV (2)
16828	E	SMAW	HY 100	12018-M2	1	7676	LEV (2)
16771	E	SMAW	CRES 309 to High Tensile	309CB (% in.)	0.6	445	LEV (3)
16876	E	SMAW	CRES 304 to High Tensile	309CB (% in.)	7.6	998	LEV (2)
16878	E	SMAW	CRES 304 to High Tensile	309CB (% in.)	7	742	LEV (2)
16896	E	SMAW	CRES 304 to High Tensile	309CB (% in.)	1.3	438	LEV (4)
16835	O	GMAW	HY 100	100S-1 (0.045 in.)	0.5	4024	Nat. Dil.
16889	O	GMAW	HY 100	100S-1 (0.045 in.)	0.4	10640	LEV (1)
16826	O	GMAW Cladding	Alloy 625	C-276	0.4	1233	Nat. Dil.
16845	O	GMAW Cladding	Alloy 625	C-276	1.3	363	LEV (2)
16833	O	GTAW	CRES 308L	308L (% in.)	<0.1	136	Nat. Dil.
16854	E	GTAW	CRES 304	308L (% in.)	0.2	455	LEV (2)
16857	E	GTAW	CRES 304	308L (% in.)	0.2	369	LEV (2)
16892	C	Oxy/Propane Cutting	HY 100		0.1	6083	LEV (4)
16901	C	Oxy/Propane Cutting	HY 100		0.1	5289	LEV (4)
16831	O	Plasma Arc Cutting	HY 100		0	100	Nat. Dil.
16894	C	Plasma Arc Cutting	CRES 304		2.2	1520	LEV (4)
16864	O	Air Carbon Arc Gouging	HY 100		0.1	4308	Nat. Dil.

E = Enclosed Area
 O = Open Area
 C = Confined Area
 LEV (1) = Local Exhaust Ventilation; 0–1000 ft/min Face Velocity
 LEV (2) = Local Exhaust Ventilation; 1001–2000 ft/min Face Velocity
 LEV (3) = Local Exhaust Ventilation; 2001–3000 ft/min Face Velocity
 LEV (4) = Local Exhaust Ventilation; >3001 ft/min Face Velocity

Table 3 — Area Air Sampling Data on Hexavalent Chromium for Welding, Cutting and Gouging Processes

Sample	Area Type	Process	Base Metal	Filler Metal	OSHA Method 215 Cr VI TWA $\mu\text{g}/\text{m}^3$	Total Fume (TF) TWA $\mu\text{g}/\text{m}^3$	Ventilation
16770	E	SMAW	High Tensile Steel	7018-M	0.1	1381	Nat. Dil.
16772	E	SMAW	CRES 309 to High Tensile	309CB (% in.)	0.2	177	LEV (3)
16877	E	SMAW	CRES 304 to High Tensile	309CB (% in.)	0.6	670	LEV (1)
16879	E	SMAW	CRES 304 to High Tensile	309CB (% in.)	0.2	847	LEV (1)
16897	E	SMAW	CRES 304 to High Tensile	309CB (% in.)	0.4	363	LEV (4)
16836	O	GMAW	HY 100	100S-1 (0.045 in.)	0.1	399	Nat. Dil.
16834	O	GTAW	CRES 308L	308L (% in.)	<0.1	139	Nat. Dil.
16855	E	GTAW	CRES 304	308L (% in.)	0.3	564	LEV (2)
16858	E	GTAW	CRES 304	308L (% in.)	<0.1	193	LEV (2)
16893	C	Oxy/Propane Cutting	HY 100		0.1	3987	LEV (4)
16902	C	Oxy/Propane Cutting	HY 100		0.2	6939	LEV (4)
16830	O	Plasma Arc Cutting	HY 100		<0.1	163	Nat. Dil.
16832	O	Plasma Arc Cutting	HY 100		0	160	Nat. Dil.
16895	C	Plasma Arc Cutting	CRES 304		4.3	2093	LEV (4)
16865	O	Air Carbon Arc Gouging	HY 100		0.1	4995	Nat. Dil.
16866	O	Air Carbon Arc Gouging	HY 100		0	334	Nat. Dil.

E = Enclosed Area
 O = Open Area
 C = Confined Area
 LEV (1) = Local Exhaust Ventilation; 0–1000 ft/min Face Velocity
 LEV (2) = Local Exhaust Ventilation; 1001–2000 ft/min Face Velocity

