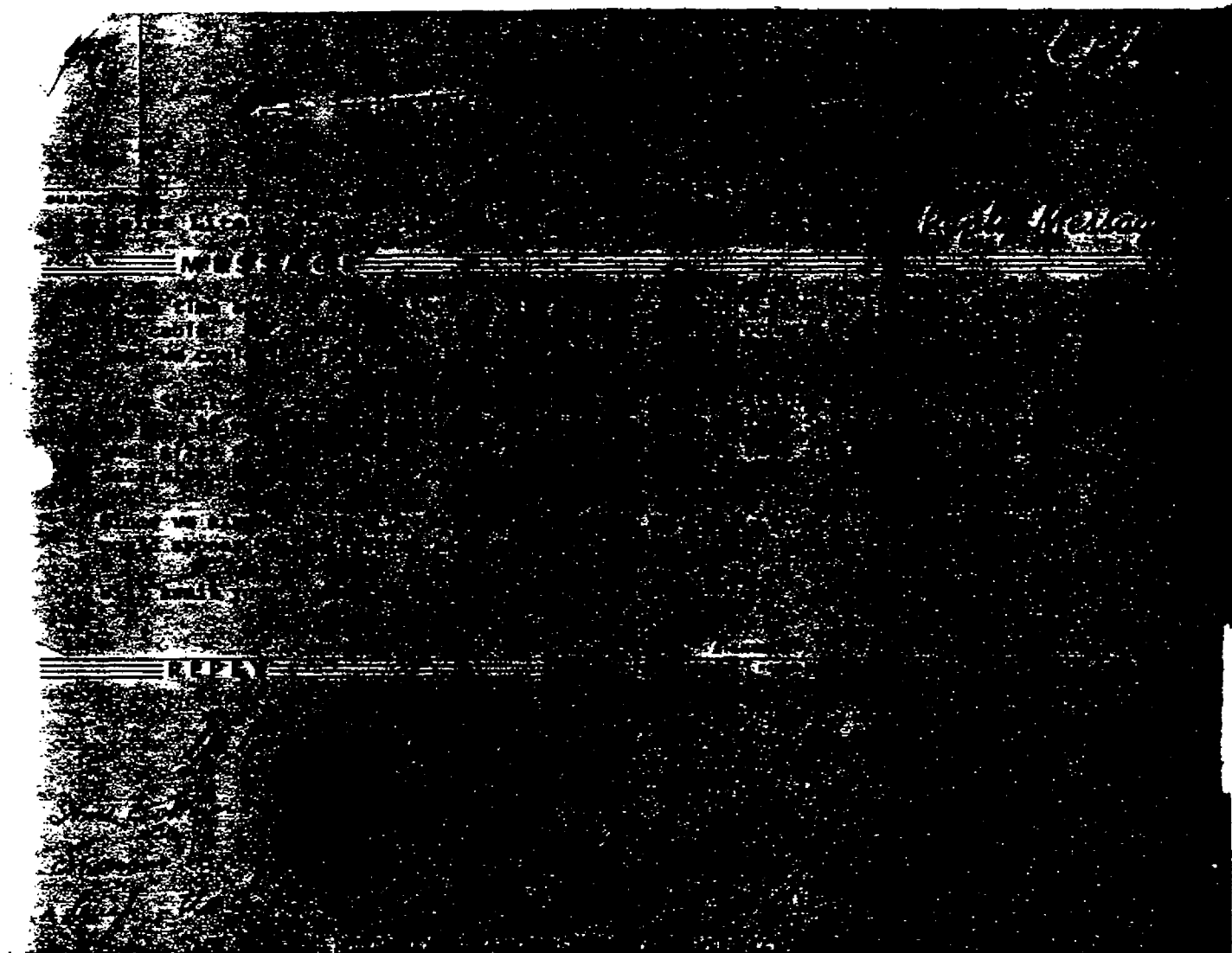


PLAINTIFF'S
EXHIBIT
E-210



RBB 00117

SC-ELEC-05990

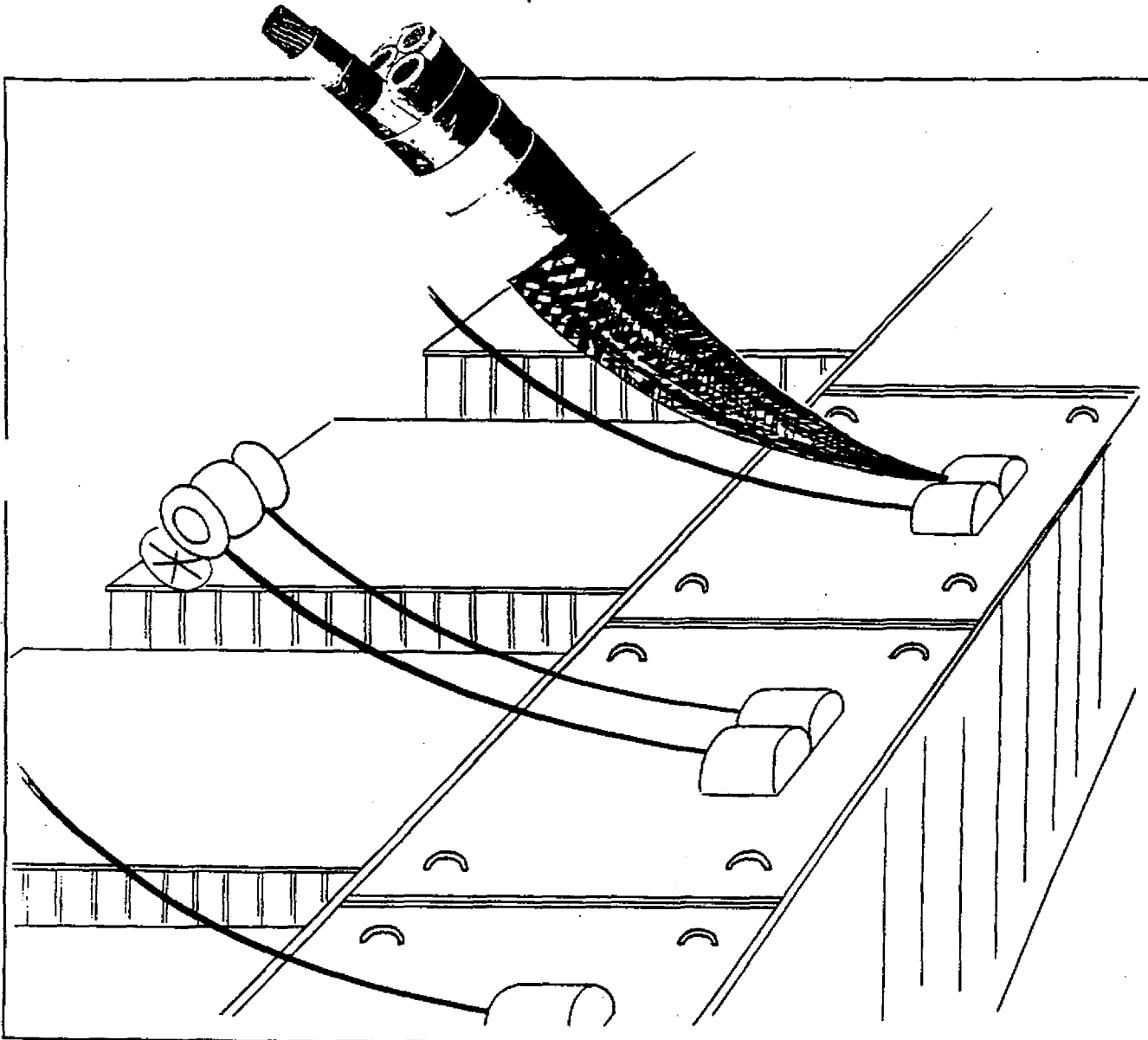
Competitors

SOAKING PIT CABLE

SASP-X600

MULTICONDUCTOR CABLE FOR POWER AND CONTROL APPLICATIONS

200°C | 600 VOLTS



CONTINENTAL WIRE & CABLE CORP.

RBB 00115

SASP-X600

200°C | 600 VOLTS

HIGH TEMPERATURE POWER AND CONTROL CABLE FOR SEVERE ENVIRONMENTS

CONSTRUCTION

FLEXIBLE STAINLESS STEEL BASKET WEAVE ARMOR

A braided stainless steel armor braid is applied overall. Coverage is $85 \pm 5\%$. Wall thickness is .020" or .025" depending upon cable diameter.

INTERLOCKED ASBESTOS TAPES

Multiple layers of CC-2402 asbestos belt insulation to form a .060" wall thickness.

CONDUCTORS CABLED WITH ASBESTOS FILLERS

The fillers are Continental CC-2500, impregnated to lubricate the core and to provide high temperature resistance.

HIGH TEMPERATURE SILICONE RUBBER INSULATION

Continental type CC-2108, Extreme Temperature Resistant, Silicone Rubber. Meets IPCEA Standard S-19-81.



REINFORCED ASBESTOS BRAID JACKET WITH HIGH TEMPERATURE FINISH

CC-2605 reinforced, high strength, high temperature, asbestos yarn is braided over the belt insulation forming a 0.45" wall thickness. The asbestos braid exceeds the requirements of IPCEA S-28-357. The asbestos braid is impregnated with CC-1150 abrasion and temperature resisting silicone base finish.

INTERLOCKED POLYESTER TAPES

Provides the mechanical binder during manufacturing and initial installation.

GLASS BRAID, COLOR CODED, WITH HIGH TEMPERATURE FINISH

A tightly woven glass braid is applied over the primary insulation. The Glass fiber, conforming to MIL-Y-1140C, is impregnated with CC-1150 abrasion and temperature resisting silicone base finish. Color Coding, per IPCEA S-61-402, method 5.

STRANDED TINNED

COPPER CONDUCTOR

Conforms to ASTM B3 and B33, and Class K and H stranding for flexibility.

SASP-X600 IS CONTINENTAL'S 600 VOLT POWER AND CONTROL CABLE FOR CONTINUOUS 200°C TEMPERATURE OPERATION IN STEEL MILLS, CEMENT AND GLASS PLANTS, OR ANY INDUSTRIAL AREAS WHERE RESISTANCE TO HIGH HEAT, OVERLOAD, ABRASION, MOISTURE, FLAME AND HOT MATERIAL SPILLS IS REQUIRED, AND WHERE THERE IS CONTINUOUS FLEXING, BENDING, TRAVERSING, REELING AND UNREELING.

Continental's unique construction of SASP featuring tinned copper, silicone rubber insulated, glass braided conductors, reinforced asbestos braid sheath and overall stainless steel armor withstands repeated exposures to 1300°C soaking pit and furnace environments plus providing excellent abrasion resistance as encountered on take-up reels or in traverse. SASP was designed in conjunction with steel mill engineering and electrical people and has proven itself in a great variety of applications and environments. Only direct metal spills or abnormal mechanical damage will require its replacement. Users have reported up to 3 years normal usage life and beyond.

Here are a few examples of the application and performance of SASP cables:

At some steel mills, SASP is used exclusively for slag car and teeming ladle car motors. When cable replacement is necessary, it is normally due to severe mechanical damage. With severe mechanical abuse, the cable requires replacement only after an average of 6 to 8 months of service. SASP used as the input cable to slag car cable tension reels has been buried in slag for over 2 years with no failure, and continually gives 1 to 2 years service life for slag and ladle cars in BOF mills, being replaced only when direct spills occur.

SASP cable has been in continuous operation on some soaking pits for almost 5 years. A four conductor power and eight conductor control cable go to each pit cover from tension reels. At each draw and fill the cable is exposed to the full flame and heat of the pit at a distance of only 4 to 5 feet over the pit. No electrical failures have occurred in this application. SASP is used extensively for soaking pit cover control wiring and for control wiring of overhead tong cranes where it provides a minimum of 2 years service.

SASP is also used for external flexible power and control wiring to blast furnace mud guns with excellent results due to the heat and moisture resistance of the silicone rubber insulation.

In applications where the cable is not subjected to high radiant heat (surface temperature less than 400°C), and is protected from direct spills and extensive abrasion, the use of SASP cable without the stainless steel armor is recommended. Such applications include overhead cranes where the cable is on traverse or festooned and are in the proximity of furnaces and rolling mills. Here the reinforced asbestos braid outer covering gives high abrasion along with excellent heat resistance.

NOTE: When using SASP for the first time, it would be well to follow a few standard precautions in the assembly of the system. Since this cable will be used in high temperature areas, the use of a good quality termination is recommended, preferably plated materials that prevent oxidation of the termination and resultant high resistance points. Otherwise good mechanical tightness in securing the armor is all that is needed. Always adhere to the minimum bending radius (12 times cable O.D.) when making terminations or providing for strain release. Stainless steel strain release fixtures are also recommended.

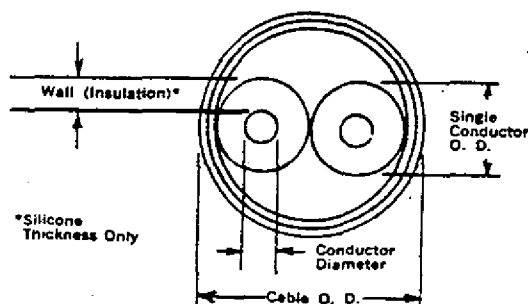
The weight of SASP cable may be greater than types previously used, therefore tension on take-up reels may need to be adjusted to compensate. High spots, and kinking can develop if there is insufficient tightness. It is well to check with the reel manufacturer giving him the weight and diameter of the cable for his recommendations.

SASP-X600 DIMENSIONAL DATA

CABLE O. D. (INS.) $\pm 5\%$								
NO. OF CONDUCTORS								
2	3	4	5	6/7	8	10	12	16
.619	.647	.694	.747	.802	.858	.985	1.014	1.124
.659	.685	.740	.795	.860	.924	1.065	1.097	1.219
.727	.760	.820	.890	.965	1.037	1.211	1.248	1.379
.881	.935	1.015	1.015	1.205	1.302	1.519	1.568	1.741
.967	1.025	1.120	1.225	1.335	1.443	1.691	1.748	1.939
1.079	1.150	1.255	1.375	1.500	1.630	1.915	1.981	—
1.235	1.305	1.430	1.570	1.720	1.871	2.207	—	—
1.407	1.490	1.640	1.805	1.980	2.156	—	—	—
1.499	1.590	1.750	1.930	2.115	—	—	—	—

CABLE WEIGHT (LBS./1000 FEET)

NO. OF CONDUCTORS										
AWG SIZE	2	3	4	5	6	7	8	10	12	16
14	220	260	300	355	410	420	460	540	630	790
12	280	330	380	470	560	580	650	790	930	1210
10	380	460	560	725	890	920	1040	1280	1520	2000
8	525	610	760	940	1120	1170	1310	1590	1870	2430
6	695	840	1040	1215	1390	1470	1615	1905	2195	2775
4	845	1080	1330	1600	1870	2000	2220	2660	3100	—
2	1240	1520	1930	2270	2610	2810	3100	3680	—	—
1	1510	1860	2380	2815	3250	3500	3870	—	—	—
1/0	1760	2190	2830	3405	3980	4300	—	—	—	—



CONTINENTAL WIRE & CABLE CORP.

BOX 1863 YORK, PA. 17405 • TWX (510) 657-4847 PHONE (717) 792-2844





AWG sizes 14 through 10 are twisted, bunched conductors; 41, 65 and 105 wires respectively, each .010 inch diameter. Larger sizes are concentric rope lay strands consisting of 19 or 37 groups of 7 wires.

Minimum Bending Radius:
12 X O. D.

AWG SIZE	STRAND	SILICONE RUBBER WALL THICKNESS (INS.)	GLASS BRAID WALL THICKNESS (INS.)	SINGLE CONDUCTOR O. D. (INS.)	2
14	41/.0100	.045	.006	.183	.61
12	65/.0100	.045	.006	.203	.65
10	105/.0100	.045	.010	.237	.72
8	133/.0111	.060	.010	.314	.88
6	133/.0140	.060	.010	.357	.96
4	133/.0177	.060	.010	.413	1.07
2	133/.0223	.060	.012	.486	1.23
1	259/.0180	.080	.012	.572	1.40
1/0	259/.0202	.080	.012	.618	1.45

RESISTANCE

AWG CONDUCTOR SIZE	NOMINAL RESISTANCE (OHMS/1000')	
	@ 20°C	@ 125°C
14	2.76	3.90
12	1.74	2.46
10	1.09	1.54
8	.674	.952
6	.437	.617
4	.274	.387
2	.169	.239
1	.138	.195
1/0	.107	.151

Note 1. Correction to other temperatures:

$$R' = R_{20} \frac{235 + T_c'}{255}$$

Where R' = Resistance (ohms/1000') at other temperature.

R_{20} = Resistance (ohms/1000') from above 20°C table.

T_c' = Other temperature (°C).

Following these simple procedures will result in greatly extended cable life.

Continental makes several variations of SASP cable for world use. SASP-XM is designed for millimeter wire sizes (metric system) and 1000 volt insulation service required in most of the world.

All SASP Single Conductors are given a 100% inspection for visual and dimensional conformity, electrical continuity, conductor resistance and a spark test. The completed cable receives 100% dielectric proof testing, insulation resistance measurements, and continuity checks.

AMPACITY

The maximum conductor temperature rating of SASP-X600 is 230°C. This means that the insulation will retain its mechanical and electrical integrity at this temperature for at least 20,000 hours. Ambients are seldom this high, thus the cable lasts longer. The practical temperature that copper transmits power before the losses become prohibitive is 125°C. Therefore the ampacities in the table are calculated for a maximum conductor temperature of 125°C, when that conductor is insulated and in free air at a 30°C ambient. Corrections or formula are given to correct ampacity for other temperatures.

AMPS CONDUCTOR 125°C/AMBIENT 30°C				
NO. OF CONDUCTORS/CABLE		2 OR 3	4 TO 6	7 TO 24
AWG CONDUCTOR SIZE	14	33	26	23
	12	44	35	31
	10	58	46	41
	8	78	62	54
	6	103	82	72
	4	137	110	96
	2	180	144	126
	1	210	168	147
	1/0	243	194	170

NOTES: 1. For multiconductor cables in single conduit, in air:

New ampacity = $0.89 \times$ any ampacity in above table

2. For more than 24 conductors:

a) 24 to 42 conductors

New ampacity = $0.60 \times$ 2 or 3 conductor ampacity from above table

b) 43 and up

New ampacity = $0.50 \times$ 2 or 3 conductor ampacity from above table

3. Correction factors for ambients other than 30°C, when the maximum conductor temperature is 125°C.

40°C	= .95	$\times$ ampacity in table
50°C	= .89	"
60°C	= .83	"
70°C	= .76	"
80°C	= .69	"
90°C	= .61	"
100°C	= .51	"