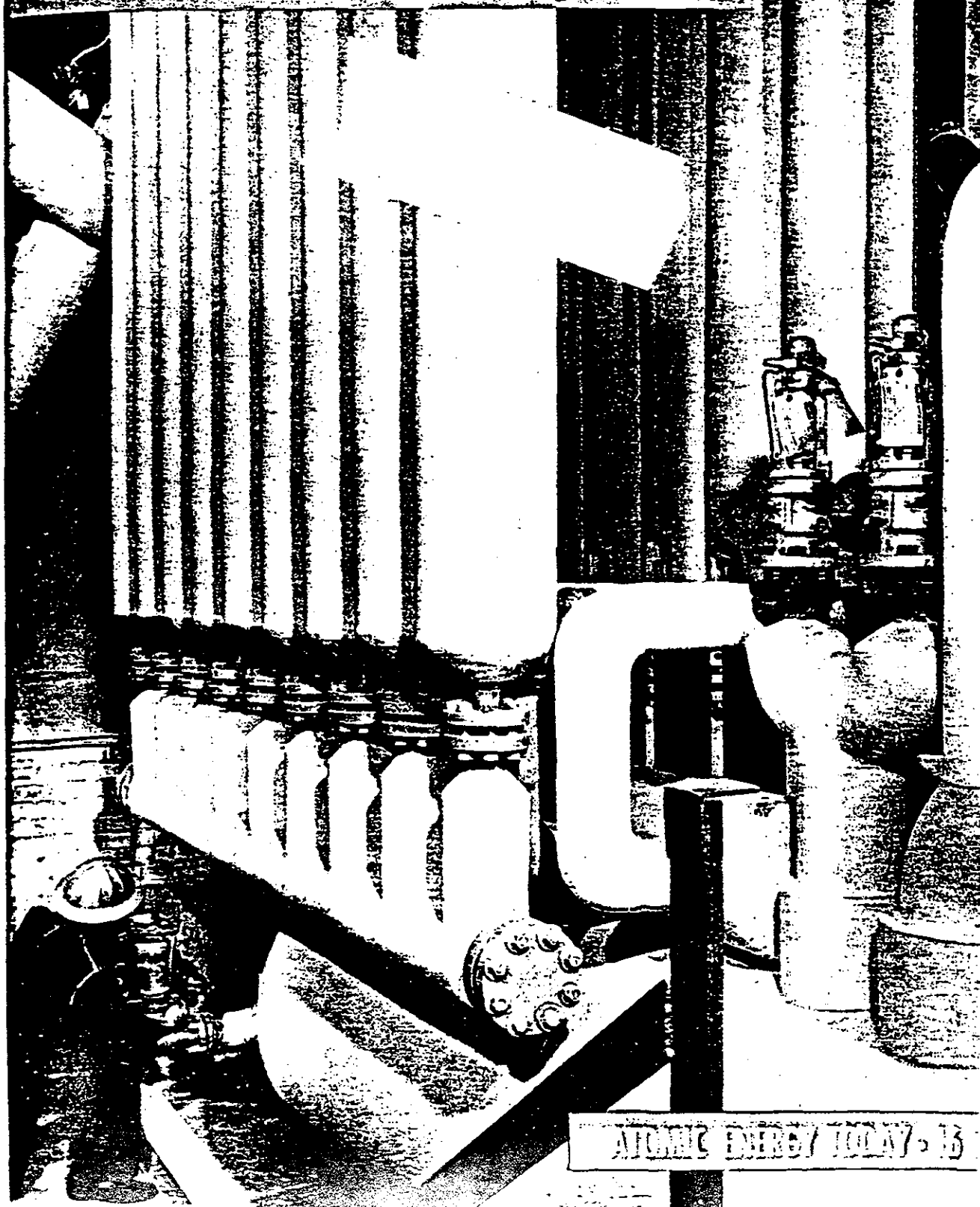


GENERATION TRANSMISSION AND APPLICATION OF THE POWER SERVICES

Power

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Power's DATA SHEET

No. 253

Typical Cable Applications in Generating Stations

Service	Max 3-ph voltage	Insulation	Installation	Covering	Finish
GENERATOR LEADS, BUS TIES, ETC ¹	2,000	Heat-resistant rubber (RH)	Conduit ²	Cotton braid	Note 3
			Insulators	Cotton braid	Note 3
			Ducts ⁴	Neoprene jacket	None
	15,000	Ozone-resistant rubber ⁶	Conduit, ducts	Lead sheath	Note 5
			Conduit ²	Cotton braid	Note 3
			Ducts ⁴	Neoprene jacket	None
AUXILIARY MOTORS	17,000	Varnished-cambric	Conduit, ducts	Lead sheath	Note 5
			Conduit ²	Cotton braid ⁷	Note 8
			Insulators	Cotton braid	Note 8
	17,000	Impregnated paper	Ducts ⁴	Lead sheath ⁷	Note 5
			Any	Lead sheath	Note 5
			Any	Lead sheath	Note 5
	2,000	Heat-resistant rubber (RH)	Conduit ²	Cotton braid ⁹	Note 3
			Conduit, ducts	Neoprene jacket	None
			Ducts ⁴	Lead sheath ¹⁰	Note 5
	15,000	Ozone-resistant rubber ⁶	Conduit, ducts	Neoprene jacket	None
			Conduit ²	Cotton braid ⁹	Note 3
			Ducts ⁴	Lead sheath ^{7, 10}	Note 5
CONTROL CABLES	17,000	Varnished-cambric	Conduit ²	Cotton braid	Note 8
			Ducts ⁴	Lead sheath	Note 5
			Conduit	None	None
	600	Vinyl resin	Conduit ²	Cotton braid ⁹	Note 8
			Conduit ²	Asbestos braid ⁹	HF ¹¹ , ¹²
			Ducts ⁴	Lead sheath ¹⁰	Note 5
	5,000	Asbestos-varnished-cambric	Conduit ²	Cotton braid ⁹	Note 8
			Conduit ²	Asbestos braid ⁹	HF ¹¹ , ¹²
			Ducts ⁴	Lead sheath ¹⁰	Note 5
	600	Heat-resistant rubber	Conduit ²	Cotton braid	Note 3
			Conduit, ducts ⁴	Lead sheath ¹³	Note 5
			Ducts ⁴	Neoprene jacket	None
EXCITER AND FIELD LEADS ¹	600	Ozone-resistant rubber	Conduit ²	Cotton braid	Note 3
			Conduit, ducts ⁴	Lead sheath ¹³	Note 5
			Ducts ⁴	Neoprene jacket	None
	15,000	Ozone-resistant rubber	Conduit, ducts	Lead sheath ¹³	Note 5
			Conduit, ducts	Neoprene jacket	None
			Conduit, ducts	Cotton braid	Note 3
RHEOSTATS	17,000	Varnished-cambric	Conduit, ducts	Lead sheath ¹³	Note 5
			Conduit, ducts	Lead sheath ¹³	Note 5
BOILER ROOMS, ASHPITS	300	All asbestos	Faceplate to resistors	Asbestos braid	HF ¹¹
			Conduit ²	Cotton braid ⁹	Note 8
			Conduit	Asbestos braid ⁹	HF ¹¹
	5,000	Asbestos-varnished-cambric	Ducts ⁴	Lead sheath	Note 5
			Conduit ²	Cotton braid ⁹	Note 8
			Ducts ⁴	Lead sheath	Note 5
POWER TRANSFORMERS Primary and secondary services	2,000	Heat-resistant rubber (RH)	Conduit ²	Cotton braid ⁹	Note 8
			Ducts ⁴	Lead sheath	Note 5
			Conduit, ducts	Neoprene jacket	None
	8,000	Ozone-resistant rubber ⁶	Conduit	Asbestos braid	Paint-filled
			Ducts ⁴	Lead sheath	Note 5
			Conduit, ducts	Neoprene jacket	None
	17,000	Varnished cambric	Conduit	Cotton braid	Note 8
			Ducts ⁴	Lead sheath	Note 5
			Conduit, ducts	Lead sheath	Note 5
	132,000	Impregnated paper	Conduit	Asbestos braid	Paint-filled
			Ducts ⁴	Lead sheath	Note 5
			Conduit, ducts	Neoprene jacket	None

Notes: 1—usually overinsulated. 2—essentially dry; if moist consider ducts. 3—smooth black. 4—moist locations. 5—Neoprene hose-type jacket overall for protection against corrosion and electrolysis. 6—preferably shielded above 2 kv. 7—look up shielding recommendations. 8—smooth black or slow-burning paint-filled and finished for indoor work. 9—interlocked steel

armor overall for metallic pan construction; alternate of bronze for single conductor or for corrosive conditions. 10—alternate of lead sheath, fibrous covering and interlocked armor for pan construction. 11—heat-, flame- and moisture-resistant. 12—in hotter locations. 13—for more reliability.

Courtesy F Aime, Electrical Engineer, Anaconda Wire & Cable Co