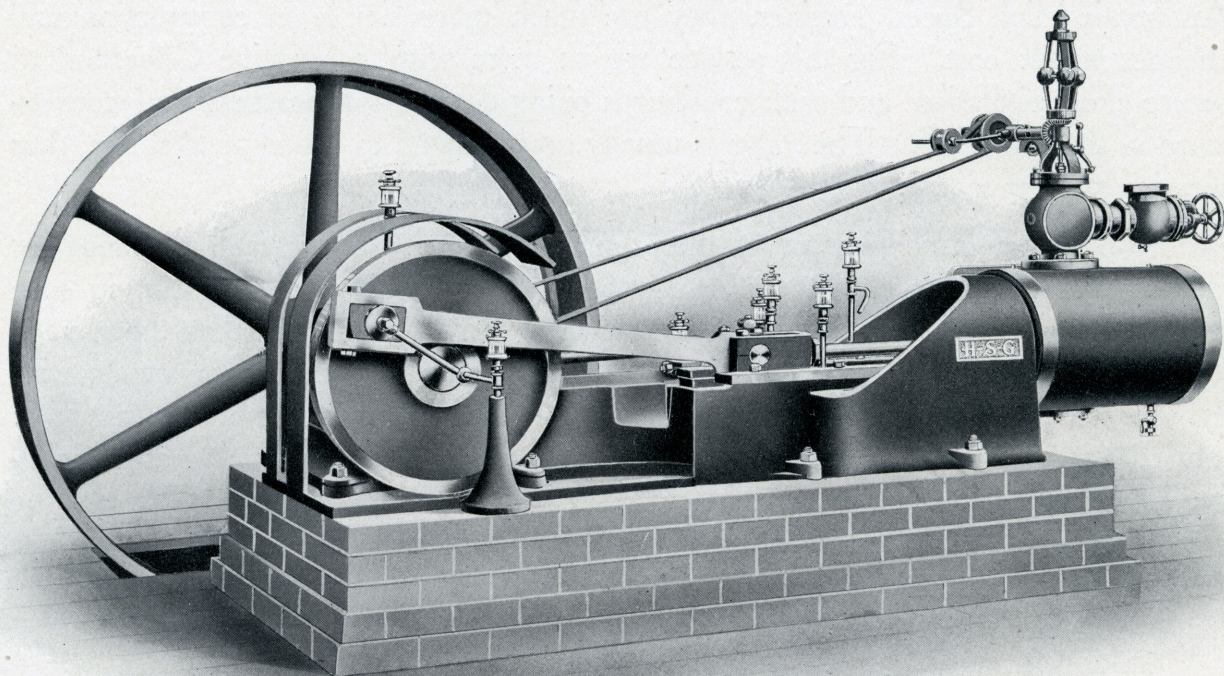


BULLETIN No. 24



ENGINES FOR DYNAMO DRIVING

FOR BELTED PLANTS FOR LIGHTING



CUT ILLUSTRATES A RIGHT-HAND ENGINE OF SELF-CONTAINED, SIDE CRANK STYLE

We furnish with these Engines the following fittings: Governor of sensitive type, with Automatic Safety Stop, Throttle Valve, Heavy Fly Band Wheel, Automatic Sight Feed Cylinder Lubricator, Spanner Wrenches, Cylinder Cocks and Oil Cups, with all necessary pipes, wipers, troughs, etc., for continuous oiling. Oil Shields and Pans are furnished at an extra price.

LUFKIN FOUNDRY & MACHINE CO.
LUFKIN, TEXAS

ADVANTAGES OF THROTTLING ENGINES FOR DYNAMO DRIVING

The Slide-Valve Engine, as we build it, at moderate speed, is particularly well adapted for driving belted dynamos, with boiler pressures high or low. On small sizes where room is available it is far superior to high speed direct connected outfits—which are short lived and expensive to maintain. As compared with small Automatic High Speed Engines, they are much more simple in construction and cheaper in first cost. For this service we fit them with a sensitive Governor, to secure close regulation, and with continuous oiling devices for neatness and convenience in the use of oil. The valve is usually proportioned to cut-off at $\frac{1}{2}$ stroke, thus securing good economy.

We have a large number of these engines in use driving small dynamos for lighting and power in city, town, store and factory, and we believe that in such plants they give a cost of production of electricity per watt-hour less than the average for small installations. They can very profitably be employed in connection with exhaust steam heating systems, and in plants where high steam pressure is used; in the latter service the throttling governor acts as a pressure reducing valve and minimizes strains on running parts of engine when it is lightly loaded. The table may be used as a guide to determine the selection of an engine of standard size, proper proportions for capacity, and economy at different boiler pressures.

SIZES OF ENGINE FOR DYNAMOS AT DIFFERENT BOILER PRESSURES

Rated Size of Dynamo in Kilowatts	Indicated H. P. of Engine When Operating Dynamo at Rated Capacity	CLASS "A" ENGINES				CLASS "B" ENGINES	
		80 LBS. BOILER PRESSURE		100 LBS. BOILER PRESSURE		125 LBS. BOILER PRESSURE	
		Bore and Stroke of Engine	Necessary Revolutions per Minute	Bore and Stroke of Engine	Necessary Revolutions per Minute	Bore and Stroke of Engine	Necessary Revolutions per Minute
12½	20	7 x 12	250	7 x 12	220	7 x 12	200
15	24	8 x 12	225	7 x 12	250	7 x 12	225
17½	28	9 x 12	225	8 x 12	250	8 x 12	225
20	32	10 x 14	200	9 x 12	225	8 x 12	250
25	40	10 x 14	225	10 x 14	200	9 x 14	200
30	48	11 x 16	200	10 x 14	200	9 x 14	225
35	56	12 x 16	180	11 x 16	210	10 x 16	180
40	64	12 x 16	180	12 x 16	180	11 x 16	175
45	72	13 x 18	180	13 x 18	160	11 x 16	200
50	80	14 x 18	160	14 x 18	160	12 x 18	175
60	100	15 x 20	160	15 x 20	160	13 x 18	175
75	120	16 x 20	150	15 x 20	160	14 x 20	160

Allow 16 16-Candle Power Lights per Kilowatt, and 10 16-Candle Power Lights per Indicated Horse Power.