| | £ s. d. |
|---|---|
| One oil-fired superheater for raising to the desired temperature the steam for the deodorizing vessel. Complete with burners, and all fittings, but exclusive of chimney. | |
| One belt-driven dry vacuum pump for maintaining the desired vacuum on the deodorizing plant. Complete with fast and loose pulleys and belt-striking gear. | |
| One oil barrelling tank, constructed of mild steel plates and provided with coil and control valves. Tank knocked down for shipment to save freight. | |
| Pipes, valves, and fittings for the refining plant above specified, comprising steam, water, oil and other piping, but not including any mains to the plant or piping away from the plant. | |
| Driving gear for the refining plant above specified, comprising the shafting, pulleys, pedestals, &c., but not including belting or motive power. | |
| Total net price .. .. .. .. .. .. | £1,709 0 0 |

R.C.H.

## DRIVING POSTS OR PILING WITH DYNAMITE.*

On many occasions it is essential to put a piling or post in water or wet ground where a pile-driver is not available, particularly when just a few piling are to be driven, which would not warrant bringing in a heavy piece of equipment.

A method has been worked out whereby the force of dynamite can be used to transmit a blow which is somewhat similar to the dropping of a pile-driver hammer. The pile is stood upright in the location desired, and braced in place—usually with rope. The head of the pile should be sawed off square, and the procedure is to put a heavy plate of steel on top of the pile. To give the best results, the plate should be 1 inch to 1½ inches thick. One stick of dynamite is placed on top of the plate, and covered with mud, after the stick has been properly primed with a blasting cap and fuse or an electric blasting cap. When the charge is exploded the force is transmitted to the plate, which in turn transmits it to the pile. The pile is driven into the ground sometimes as much as 14 inches, if the ground is soft. The procedure is then repeated until 1 inch penetration per explosion is obtained.

If the top of the pile is not square, or if there are some flaws in the wood near the top, a brooming or split effect usually takes place. Hence it is advisable to have about 4 feet extra length, which can be sawed off after complete penetration is obtained.

While this procedure is not an economical one, provided a pile-driver is available, it does provide a new method for putting individual piles or heavy posts in the ground in a very solid compact manner.

The Engineering Division of the United States Forest Service completed some comparative tests between dynamite and a pile-driver for this work.

Piles of a standard size were put down with dynamite shots until the penetration was equal.

Various loads of dynamite were used and results indicated that in general one stick of 50 per cent. Straight N.G. Dynamite weighing ½ lb. was the maximum load to use.

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