

Power Prices in Grenoble.

Good quality steam coal in Grenoble costs about \$5 per ton. The two power companies in the field sell for about the same prices. Those of the Societe Grenobloise are, in general, as follows:—For 24 hours service the average prices (variable on account of distance) are, say for 100 horse-power, \$30 per horse-power year, and for 500 horse-power about \$26 per horse-power year. In 500 horse-power quantities

prices run down as low as \$18 for transmitted power and even to \$12 at the station. This company has now 15-year contracts for about 15,000 horse-power, with some customers 100 miles distant (by line). In the case of the Champ Company selling upwards of 4,000 horse-power, the average price per horse-power of the output is about \$25 on a 12-hour day and \$30 on a 24-hour day. Lighting current, sold in Grenoble by the city plant, costs about 12 cents per k. w. hour.

SYSTEM IN INDUSTRIAL ESTABLISHMENTS

BY A. J. LAVOIE.

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THE FOUNDRY.

Article X.

Production Office requisition form No. 29, delivered to the Foundry Foreman's office, contains all necessary information to enable this department to get out work without confusion and with despatch. A glance at No. 29 will show the comprehensiveness of the formal instructions.

Sometimes blue-prints are found necessary to supplement the written instructions. If prints are required, a requisition for same to the Engineering Department, No. 3, will bring the required print, as per chart, form No. 61. Now, the foreman, having everything in hand to prepare the work for his men, a job card is necessary (see form No. 54 and No. 113, and No. 45 and No. 113). These job

workman can get from the cupola the precise metal mixture or alloy he requires. This is of great importance, both as regards quantity and quality of work. (3) The amount of time to be spent on any given work is specified by the workman on job card No. 54 and No. 113, and No. 45 and No. 113, subject to the approval of the foreman.

(The reader may glance over paragraph No. 3, under "The Making of the Pattern," for the use of form No. 45 and No. 113, which is handled similarly to form No. 9 and No. 20.)

Material.

In the preparation of moulds and cores diverse kinds of sands, facings, etc., are required. The workman, assisted

| | | | | | | | | |
|--|---------------------------------------|-----------|----------|-----------------------------------|------------------------|----------------|------------------------|---|
| (This form to be made in triplicate.) FOUNDRY DEPARTMENT NO. 7 DATE PREPARED A. J. LAVOIE'S SYSTEM NO. 114 PREPARED BY A. J. LAVOIE'S SYSTEM, LONGUEUIL, P.Q., CANADA Cupola No. _____ Quantity of Metal Required _____ lbs. | Specification of Material, Fuel, etc. | Grade No. | Pile No. | % for each Mater'l | Weight of each Mater'l | Cost per Pound | Cost of Material \$ c. | CUPOLA HEAT REPORT No. _____ Remarks Weight Value per lb. Cost \$ c. Good Castings Bad Castings Surplus Metal Gates Total pounds of Iron tapped Title of Workman Time taken Rate Cost \$ c. Chemist Report No. Cupola Men Helpers Apprentices LABOR—Totals Cost of Labor Cost of Power for driving blower Cost of Fuel Cost of Good Castings Burden No. TOTAL COST OF METAL APPROVED BY CHEMIST APPROVED BY FOUNDRY FOREMAN |
| | Fire Brick | | | | | | | |
| | Fire Clay | | | | | | | |
| | Wood | | | | | | | |
| | Coke | | | | | | | |
| | Flux | | | | | | | |
| | FUEL—Totals | | | | | | | |
| | Pig | | | | | | | |
| | Pig | | | | | | | |
| | Pig | | | | | | | |
| | New Scrap | | | | | | | |
| | Machine Scrap | | | | | | | |
| | Shop Scrap (Turnings) | | | | | | | |
| | Bad Castings from Heat No. | | | | | | | |
| | MATERIAL—Totals | | | | | | | |
| Total Pounds of Iron Tapped | | | | | | | | |
| Total Loss of Material in Melting | | | | | | | | |
| Blast on | hours | minutes | | Average blast pressure in oz. | | | | |
| Blast off | | | | Pounds of metal per pound of fuel | | | | |
| Duration of Heat | | | | Cost of good castings per lb. | | | | |

Printed Black on 20 lb. Fawn Color Bond Paper. Size of form, 6 x 10 inches.

cards are prepared by the clerk as soon as the requisition (form No. 29) is received in the foreman's office. The clerk has also to handle the stores, attend to tool-room, index patterns, keep record of good or bad castings, etc.; in fact, does all the clerical work required by the Foundry Department.

Labor.

In filling the job cards (form No. 54 and No. 113, and No. 45 and No. 113) the clerk must (1) consult the foreman as to which workman is to do the work. Then locate the pattern, and fill in pattern index card, form No. 111 and No. 112. (2) In locating the job card in the selected workman's allotment in the filing cabinet, be careful to so specify the work that when the time comes to pour the metal the

by the sub-foreman, having estimated the probable quantity of materials needed to do his work, the foreman prepares form No. 40 and No. 21, of which the original goes to the Stores and the duplicate to the Cost Office (Department No. 4) the same day. The duplicate, however, should be kept on a separate file in Cost Office until the Stores copy is received, which should arrive before noon the following day; then both copies are regularly filed in numerical order under their job numbers and according to drawing number. In this way a strict detailed account is kept of the material required to make any particular mould or core.

Metal.

An adequate supply of metals, without waste, is very necessary, and requires to be dealt with in detail. The