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Between Ourselves

In This Issue

MUCH attention is at present being focussed on the subject of air conditioning and, although it has for some time been recognized as beneficial for patron comfort in restaurants and theatres, it is now being realized that it is almost a necessity in industries having a large dust menace such as foundries. The first article this month describes briefly what air conditioning is and what is required for fully conditioned air.

ONE industry which requires conditioned air in the manufacturing process is the silk industry. Two interesting units have recently been installed in the plant of Weldrest Hosiery Ltd., Mount Dennis. One of these units supplies hot humid air, while the second supplies humid air at a temperature of about 18 deg. F. The method and equipment employed for both these conditions is fully described.

OPERATION costs of Diesel engines is a subject about which the average engineer knows very little. Although the Diesel engine is rapidly gaining favor as a prime mover in the Canadian field, its progress may be slightly retarded due to this ignorance of costs. The subject is fully dealt with in the Diesel section.

STILL another industry which requires conditioned air is the brewing industry, where an even temperature is required in order to maintain a standard quality. The equipment used and the method of installation of the equipment and ducts forms an interesting article.

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SEPTEMBER, 1935

Less Than the Dust

SMALL though the particles of dust which float in the atmosphere may be, a large number are, nevertheless, visible in a ray of light. These visible particles, however, do not constitute all of the dust in the atmosphere, there being infinitely more of a much smaller size. In addition, microscopic microbes are an ever-present enemy in polluting the atmosphere. Even those particles of dust which can be seen can sometimes have a very deleterious effect on human beings when drawn into the lungs.

So serious is the dust menace that a comparatively new interpretation of the Ontario Workmen's Compensation Act has been given which has the effect of making eligible for compensation any employee who has contracted the disease silicosis, no matter in what kind of employment. This has brought about a good deal of general discussion on the problem as a whole, and certain suggestions have been advanced in a tentative way to some of the foundries, on the understanding that a serious study of the problem be put into effect.

This very subject of dust control received a considerable amount of attention at the annual convention of the American Foundrymen's Association which was held in Toronto this summer. One speaker pointed out that, "due to the need of preventing health hazards in foundries, and to the increasing inclusion of references to dust elimination in labor and occupational diseases, greater attention must be paid to dust collection in foundries."

HENRY FORD, always in the forefront of any engineering developments, has also realized the importance of dust control in the foundries, and in the recent modernization of his blast furnaces at the River Rouge plant included the installation of air conditioning facilities in both the machine shop and foundry. The importance of dust control in this particular foundry may be realized from the fact that the air washing apparatus which had previously been used to supply outside

of dirt a week. This falls through the water screen into large metal pans, of which there are 14. Each of these pans fills to a depth of 5 or 6 in. in a week.

This is but one phase of the subject of air conditioning, the controlling of the temperature and humidity being also of great importance, and where the amount of dust is not so great, may be of even greater importance. In the Ford plant it was found necessary to install air conditioning equipment in the cylinder lapping room because there was a variation in the size of the cylinder block on very hot days compared with cooler days. Because of the very close and accurate pitch of pistons in the cylinders of the Ford V-8, this variation was apt to cause an engineering problem which has now been eliminated.

IN THIS case temperature control of the atmosphere was an absolute essential for the satisfactory production of a motor car engine. The human body can be considered as a far more intricate piece of "mechanism" and should, therefore, receive more attention. This fact is being gradually realized, and air conditioning is now coming to the fore.

In addition to those industries or processes which require air conditioning in order to obtain a satisfactory product, air conditioning can be used to advantage for human comfort in addition to eliminating injurious dust and microbes which are ever prevalent in the atmosphere. Not only are the theatres providing a comfortable atmosphere for their patrons, but by means of their air conditioning installations are rendering a service to the community by the killing of disease-carrying germs. Industry could well follow the example set by theatres, restaurants, etc., by the installation of air conditioning units for the greater comfort and security of health of their employees.

James Breaker