The velocity figures have not been scientifically developed, it must be noted

Health factors. Men's performance in heat can be improved greatly by acclimatization, which can be of real benefit Other factors that affect performance in heat are selection, control of fatigue, nutrition, and alcohol habits, and by periodic examinations for detecting early symptoms of health problems Persons with cardiac and circulatory system ailments require careful handling and guidance on jobs involving heat exposure

Sufficient water intake along with salt is essential Every ounce of sweat (a vital part of man's cooling system) must be replaced by drinking water

With a high sweat rate, much salt is lost To avoid heat cramps and other effects, salt must be restored to the body by means of salt tablets or with salted drinking water

Although taking salt tablets does not seem to be as highly regarded today as in the past, it does have a secondary benefit—it forces a person to drink water, which is quite necessary Unfortunately, when a person is in a hot environment, his thirst is often *not* an indicator of how much water he needs to replace liquid lost through sweating It often becomes important that people force themselves to drink a lot of water, even though their thirst does not call for it

Cramps and heat exhaustion are likely to occur if the salt lost by sweating is not replaced in the body Salt lost in sweat may amount to 6 to 8 teaspoonfuls per day Salt is best replaced by drinking salted water (0 1 per cent by weight) After getting used to it, men seem to prefer its taste to the flatness of unsalted water One teaspoon of table salt to a gallon of water is adequate and not unpalatable to drink, especially when cool In many industries salt tablets are widely used Too frequently, however, men are not guided on how many to take and how often

Makeup Air

Whenever air is exhausted from a building, regardless of the method, outdoor air must enter to take its place The incoming air may enter through random cracks around windows and doors, as general "infiltration," or special provision may be made to supply makeup air

Makeup air is an obvious necessity For this very reason, it is amazing how often its importance is completely overlooked The problem is not simple, but rather one of considerable magnitude

Take an installation where 100 per cent tempered air should be used at factory doors 10 by 10 ft wide on a 0 F winter day when air velocity is 1000 fpm To heat this incoming air, 7 5 million Btuh will be needed The weight of this air in itself is 250 tons Certainly no small unit heater spotted over this doorway will be able to solve the problem

The following discussion of makeup air is taken directly from *Industrial Ventilation—A Manual of Recommended Practice,* published by the American Conference of Governmental Industrial Hygienists, see "References"

Natural infiltration

The need for makeup air should not be based on "air change" figures since there is a great variation between new and old buildings, as well as differences in basic building types A relatively old building with large sash areas is "open" and air leakage will be quite pronounced On the other hand, a modern, windowless plant of masonry construction is practically air tight and the building will be truly "air starved" with appreciable exhaust ventilation Between these two extremes it is difficult to apply engineering data to determine minimum volumes required In general it is best to provide makeup to supply approximately the same volume of air as that exhausted

Makeup air is important for the following reasons

1 To make sure that exhaust hoods operate properly—A lack of makeup air creates a "negative pressure" condition which increases static pressure which the exhaust fans must overcome This causes a reduction in exhaust volume and is particularly serious with low-pressure fans such as wall fans and roof exhausters

2 To ensure the proper operation of natural stacks such as combustion flues and vents

3 To eliminate high-velocity cross drafts through windows and shipping doors—These cross drafts not only interfere with proper operation of exhaust ventilation but