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Operated By

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MIAMI, OHIO

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authority of DR. David L. Lewis dated 8/20/70
by Carolita L. Lewis 5/22/21
Reviewed by C.W. Huntington 8/22/79

A DESIGN FOR A REMOVABLE FLOOR-DRAIN GRILL AND TRAP FOR USE IN RADIOACTIVE RISK AREAS

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INTRODUCTION

A design is proposed for a removable drainage grill and trap for floor drains in radioactive risk areas. One simple element provides free liquid run off, an air and fume barrier, and ready access for cleaning or replacement in event of contamination. Application may be made to existing and future untrapped drains.

PRESENT STATE OF KNOWLEDGE

Experience gained in attempting to control the accumulation and spread of radioactive contaminants in the past has indicated the necessity for elimination of inaccessible points of possible contaminant collection.

Because conventional traps in imbedded floor drains are both relatively inaccessible and difficult to decontaminate, they have not been installed in numerous risk areas. In such areas this has resulted in the problem of having to choose either to have the drains open with resulting uncontrolled air and fume circulation or to close the drain openings with resulting lack of facilities for run off of liquids from safety showers, sprinkler heads, leaks or spills during emergencies or periods when the area is not occupied.

PROPOSED METHOD

Figure 1 shows the general arrangement of the proposed drainage grill and trap and its installation in a typical floor drain opening.

The grill and trap may be made most economically as a one piece grey-iron casting in the generally used sizes. While other materials or methods of construction may be justified in special cases, ease of removal and replacement reduce the value of using the more costly corrosion resistant alloys. While the design shown in Figure 1 indicates a floor drain installation, it is obvious that the same principle may be applied to other drains in risk areas.

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Figure 1

COMBINED GRILL AND TRAP

DIMENSION TO SUIT DRAIN OPENINGS

SCALE: $\frac{3}{8}" = 1"$

SECTION "A" "A"

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