



INTERPRETATION: IIAR SC 2020-1

FINALIZED: May 5, 2020

SUBJECT: Use of Gravity Intake for Makeup Air

BACKGROUND: IIAR-2 2014 Addendum A section 6.14.5.2 states, “Make-up air supply locations in the machinery rooms shall be positioned to prevent short-circuiting of the make-up air directly to the exhaust.”

QUESTION 1: Would Gravity Intake units be acceptable as the only make up air for a machinery room?

ANSWER 1: Gravity intake hoods/louvers/units are not prohibited devices for makeup air. However, the requirements prohibiting the short circuiting of intake air to the exhaust, as well as those that prohibit short circuiting of exhaust to the intake must be met.

QUESTION 2: What distance would the exhaust fan need to be from a gravity intake in a machinery room in order to avoid short circuit of exhaust air?

ANSWER 2: The standards committee cannot universally predict air flow patterns or offer guidance for a specific installation. There are too many variables in room layout, temperature differences, equipment selection etc. A process hazard analysis is useful to identify situations where there is doubt about performance of the ventilation system. Computational fluid dynamics (CFD) modeling or smoke test verification are tools that could be useful when there is doubt about performance.

QUESTION 3: Does a smoke test or any other test need to be conducted to prove air flow coverage in a machinery room?

ANSWER 3: A smoke test or any other test is not a requirement.

COMMITTEE ACTION: None.



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