

## **Interpretation for ANSI/AMCA 99-2010, 0401\_ Classification for Spark Resistant Construction**

**Request from:** Rad Ganesh, Twin City Fan Companies, 5959 Trenton Lane, Plymouth, MN 55374

**Reference:** This request refers ANSI/AMCA 99-2010, Classification for Spark Resistant Construction

**Background:** Note 1 (pg 62) is being interpreted as Normative requirement. See attached explanation on practical challenges.

Attached explanation on practical challenges:

We are ok with the 'Fans only' of [the first page of Section 8 of AMCA 99-16] but are unclear on Arr 4, arr 3 with drive components in the air stream, specifically fan bearings, belt drives and motors. The kicker is note 1 [also on the first page of Section 8 of AMCA 99-16] "No bearings, drive components or electrical devices shall be placed in the air or gas stream unless they are constructed or enclosed in such a manner that failure of that component cannot ignite the surrounding gas Stream." This is a very loose statement. Bearing and motor manufacturers never guarantee this statement because of liability. Bearings are enclosed in metal casings and TEFC, Explosion Proof (XP) motors have protective casings. The final para below note 5 covers it well. "The use of the above Standard in no way implies a guarantee of safety for any level of spark resistance. Spark resistant construction also does not protect against ignition of explosive gases caused by catastrophic failure or from any airstream material that may be present in a system." Thus in my opinion, Note 1 should be removed due to the above disclaimer as it is causing us loss of potential business."

**Interpretation:** Note 1 should be removed as intent being captured after note 5.

**Question:** Is this Interpretation correct?

**Answer:** No (See comment)

**Comment:** The committee thought that Note 1 should be modified as noted below to better define the requirements for motors, drives or other electrical components in the airstream.

"1. All bearings, drive components, motors, and other electrical devices in the air stream shall be constructed or protected with adequate spark resistant enclosures (for example: explosion proof motors, electric boxes, switches, conduits and belt guards)."

It was also noted that definitions found in ISO 13349 (as found in Annex B of AMCA 99-16) be revised at the next opportunity.