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TO WHOM IT MAY CONCERN

RE: INTERPRETATION OF VESSEL PROTECTION REQUIREMENTS ACCORDING TO API 2218

PFPNet is an independent, subscription-funded body, dedicated to raising standards in the use of Passive Fire Protection (PFP) in industries where hydrocarbons are present. It is a not-for-profit body focused on serving the needs of the users of hydrocarbon PFP materials and systems, through a focus on education, training, capturing and retaining existing knowledge, researching key topics, clarifying points of confusion and disseminating information to the industry at large – all with the aim of improving quality.

PFPNet established a technical sub-committee to engage with Standards and Guidance Organisations and where required, to provide clarification on points of confusion.

A recent request to that sub-committee concerns the interpretation of API 2218 Table 2 – Level of Fireproofing Protection in Pool Fire Scenario Envelope, and whether or not this permits the use of LPG vessels protected by fireproofing (PFP) only, ie PFP used without a fixed water spray system. Table 2 is reproduced below for clarity (*copyright API*).

Table 2—Level of Fireproofing Protection in Fire-Scenario Envelope

Equipment	Protection Level ^a	Section in API 2218 or Other Reference
LPG vessels if not protected by fixed water spray systems.	Fireproofed equivalent to 1 ½ hours in UL 1709 (or functional equivalent).	API 2510 (1995) Section 8.7 Section 6.2.2
Pipe supports within 50 ft or in spill containment area of LPG vessels, whichever is greater.	Fireproofed equivalent to 1 ½ hours in UL 1709 (or functional equivalent).	Sections 6.2.2 and 6.2.3 API 2510 (1995) Section 8.8.5
Critical wiring and control systems.	15-to-30-minute protection in UL 1709 (or functional equivalent) temperature conditions.	Section 6.1.8.1 API 2510 (1995) Section 8.11

Note: ^aSome company standards require protection greater than that shown in column 2.

The PFPNet membership interpret the guidance given in Table 2 as follows:

LPG vessels may be protected using PFP systems without the use of fixed water spray system, where the PFP system is designed to maintain a safe temperature and pressure of the vessel for a duration of at least 90 minutes. Several published research papers have demonstrated (*Anderson & Townsend, 1974; Droste, 1992*) that correctly specified and designed PFP, without a water spray system, is effective at prolonging the survival time of LPG vessels engulfed in hydrocarbon pool fires.

The opinion given in this letter does not make any judgement on the appropriateness of the design guidance given in API 2218 table 2, nor does this letter absolve the responsible person or the authority with jurisdiction from performing their own checks to ensure that all safety requirements are met.

However, it is well-established that PFP alone can be an effective means of providing fire protection to LPG vessels, and it is the view of PFPNet that Table 2 of API 2218 permits this.

Yours faithfully



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