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To: ALL LIQUIP DISTRIBUTORS
ALL LIQUIP SYDNEY COMPANIES
ALL TANK MANUFACTURERS

From: DAVID GREGORY

Subject: TECH TALK 39

Static Electricity - Maximum Liquid Flow Rates

To avoid the generation of excessive and potentially dangerous levels of static electricity, API Code CP8 and Australian Standard 1020 recommend that liquid hydrocarbon velocities be set at or below their recommendations.

See attached table.

Note 1 The limit is 6 m/sec velocity for 100mm nominal bore pipes and 7 m/sec for 80mm nominal bore and smaller.

Note 2 Calculate flow rates using actual bore diameters. e.g. Aluminium pipework on trucks is actually 94mm bore, although commonly designated "100mm tube". Using the real diameter gives a permissible flow rate of 2,500 l/min for typical bottom loading maximum (whereas the theoretical flow rate for a theoretical 100mm bore is 2,825 l/min max).

Similarly, allow for any significant lengths of restrictions such as in hoses and associated piping and nozzles etc. in pumping systems.

AIP CODE OF PRACTICE CP8

MAX RECOMMENDED FLOW RATES *

Nominal Bore	Max Flow Rate
mm	litres/min
25 mm dia	200 l/min
32 mm dia	340 l/min
38 mm dia	475 l/min
50 mm dia	820 l/min
63 mm dia	1,330 l/min
75 mm dia	1,850 l/min
94 mm dia	2,500 l/min
100 mm dia	2,825 l/min

*** APPLICABLE TO MOST HYDROCARBONS BUT, SUBJECT TO MANAGEMENT APPROVAL, SOME GASOLINES CAN BE PUMPED AT HIGHER RATES WITHOUT HAZARD.**