KelairPumps

PumpAction..... Issue 49 April 08

Case Study

Sandpiper's so simple to use

Sales Engineer Hem Prakash QLD

Moving a range of chemicals either caustic or acid-based at low cost is always a challenge.

Pictured are Sandpiper SO5 Poly / Santoprene pumps being successfully used for moving a range of products for Campbell Cleantec, one of the leading industrial cleaning chemical companies.

These pumps are used for transfer from 200 litre drums to bigger holding tanks or vice versa. In a typical set-up there are about six SO5 Poly / Santoprene pumps in a bay.

The major advantages in using Sandpiper in this application are:

- Pumps can run dry without damage after the drums are empty.
- A typical total clean sucks up the chemicals from the bottom of the 200 litre drums.
- Can do a dry suction lift
- Easy and simple to use.
- ESADS + air valve system, enables consistent restarts for every drum transfer.

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Safety for Pumps On "Class 1 - Zone 1" Sites

Sales Engineer Alex Calodoukas NSW

Recently one of Kelair's customers who operates a Class 1–Zone 1 (flammable area) industrial site had a potentially dangerous situation arise when the muffler on an air operated diaphragm pump (AODP) caught fire. AODP's are often used in flammable environments as they have no electric motor to produce a spark. They are a cost- effective alternative to centrifugal pumps operated by ExD rated electric motors (which can be expensive).

The customer earthed their pumps and checked for "electrical continuity" on a regular basis, wanting to ensure that there was no way of storing electric charge. A charge could eventually lead to a spark, which could potentially have horrendous consequences on a Class 1 Zone 1 site. But there was one aspect that escaped notice - plastic mufflers were fitted to some pumps. Plastic stores static charge and plastic mufflers are no exception. It was one of those plastic mufflers that caught fire.

Since the incident, all plastic mufflers on all the customer's different brands of AODP's on site have been replaced with metallic mufflers. Safety is paramount. So if you have AODP's on your "Class 1 Zone 1" site, check them regularly for electrical continuity, earth your pumps (see page 2), and replace all plastic mufflers with suitable metallic versions. Contact Kelair Pumps for assistance, no matter what brand of pump.

Note: See following comments from Warren Rupp® if this article is relevant to your site:

Warren Rupp (manufacturer of Sandpiper AODP's) has introduced several pumps that are designed for working in potentially explosive environments. The ATEX units comply with EN809 pumping directive: Directive 98/37EC Safety of Machinery, and Directive EN13463-1 Equipment for use in Potentially Explosive Environments.

The Muffler used in the ATEX units is metallic with a metallic non-absorbent element.

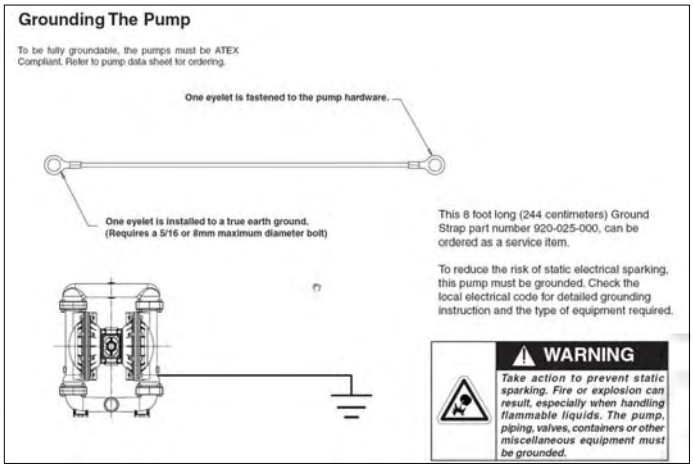
(Cont.)

(Safety for Pumps On "Class 1 - Zone 1" Sites cont.)

*It is **very important** to properly ground these units. (See drawing opposite). This should be done in accordance to the local electrical code.*

***Please note** that adding an ATEX muffler to older models does not necessarily mean there will be continuity throughout the pump. Our ATEX units also utilise "conductive" gaskets to help assure full continuity throughout the pump.*

Continuity between the suction inlet and the muffler and various other components of the pumps should be checked.



Case Study

Pulsafeeder's Omni's are A1 at Cleantec

Sales Engineer Hem Prakash QLD

Campbell Cleantec is one of the leading industrial cleaning chemical manufacturing companies in Australia. It designs and builds many of its own

cleaning chemicals' dispensing systems. Such systems normally require accurate metering to dispense the cleaning chemicals, so they need to be compact, robust and economical.

Logistics Manager Tim Ray of Cleantec contacted Hem Prakash of Kelair Brisbane in early 2007 to size and supply suitable metering pumps for a laundry cleaning system.

The Cleantec laundry system designed for the project was a "state of the art" dispensing system capable of handling various types of cleaning chemical formulations with various controls. These systems can typically run seven days a week.

Hem recommended using Pulsafeeder's Omni pump model DC2CYFP a PVDF pump head with Teflon Elastomers. The Omni DC2CYFP pumps are rated to handle up to 76 l/h @ 10.3 bar pressure which easily met the requirement of the laundry system design.

Apart from the Omni's ability to handle the duty cycle easily it has the following advantages:

- The standard material of construction of the dosing head is in PVDF which can handle various chemicals and concentration much better than other plastic material available on the market.

- It is oil free, i.e. greased for life with no oil to change during operation.

- Omni Series pumps are economical, rugged, and simple to operate.

- Omni Series pumps are compact and light-weight thus saving space and are easy handling.

Omni's are controller ready and by adding Metering Pump Controller (MPC) the turn down capacity is 1000:1.

Along with the dosing pump, Kelair also supplied a five-function valve with De-Gas.

The features of this valve include:

De-Gas – Bypass gasses and fluid during normal pumping operations.

Back Pressure: Maintains out reproducibility and allows metering into atmospheric discharge

Anti-Siphon: Prevents siphoning through the pump when point of injection is lower than the pump or into the suction line of another pump.

Air-Bleed: Used during priming to manually remove air from the pump head.

Discharge Drain: Depressurises pump discharge line without loosening tubing or fittings, protecting the operator from chemical exposure.

The five-function valve can handle up to 1000 cPs with pressure rating up to 250 psi.

On discussion of the performance of the pumps with the client, Tim Ray says, "these pumps are mechanically A1 and perform as they are supposed to."

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