

November 2015 Update

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CONNECTING INDUSTRY





Extinguishing the myth of "Watermarking"

Every industry creates its own set of standards & regulations that are set in place to protect the consumer & the manufacturer. Whilst the intent is always good sometimes even the innocent can be caught up in the widely cast net.

WaterMarking was established in the gas & plumbing sector to, amongst other reasons, protect the buyer from products that may leach poisons or dangerous material into potable water i.e. hot water heaters. In this application, if incorrect materials were used, in say the heating tubes or even the domestic piping, then heavy metals like copper, lead or even PVC residue could leach into the water & poison the user. Because of this an industry code was established (WaterMark) & standards were set for a certification where any gas or plumbing product (valve, piping or fitting) intended for use in potable water heating systems could be tested & certified to be fit for purpose.

However, when you cast the "WaterMark net" you may just catch products like Plate Heat Exchangers (PHE'S). PHE's must comply with the Australian & New Zealand unfired pressure vessel act - NZ/AS-1210. PHE's simply don't (& most often cannot) meet the criteria set out in the WaterMark test. "Why not?" It is the obvious question. Why don't we just insist that the PHE manufacturer have all PHE's WaterMark approved? The answer is twofold and you firstly have to appreciate that PHE's are purpose built appliances, made to order, they are not mass produced or standard in any way. There is an infinite set of combinations that a PHE can be assembled to from 0.01m²/plate to 3.5m²/plate, from 5 plates in a PHE to 1,000 and with this plate variance & so its liquid volume can vary too, from 1 litre to 10,000 litres. It simply is site specific.

Not only are dissolving poisons a concern but so too is the entrapment or dilution of eroded substance into the flow stream. A typical application for a plant room PHE is to heat water for say a 1,000 room Hotel, the PHE often weighs anywhere from 1,000 to 6,000 kg/unit, it can have 2" 4" 6" or even 8" hot water connections and have a liquid volume of up to and exceeding 6,000 litres, all the time whilst having hot domestic & potable water flowing through it at a rate of 5 to 80 l/sec. So for obvious reasons the PHE in all its variances may not be WaterMark tested and the Plate Heat Exchanger may be authorised for use in a plumbing or drainage installation using other evidence of suitability.

Sondex Australia have thoroughly investigated all avenues for obtaining a WaterMark certification and have even had the PHE reviewed and assessed by an Authorizing consultant for compliance, however due to their size, irregularity and high liquid volumes, PHE's fall within the safeguard of "other evidence of suitability" as described in the national construction code. So in order to comply with the national construction code the PHE manufacturer has several avenues that it may employ including having a suitably qualified hydraulic consultant confirm the design and sign off on it. Alternately have all the materials in contact with drinking water tested for AS/NZS 4020 drinking water compatibility, or submit international certification i.e. US3A sanitary &/or KIWA NI certification of product testing, thus independently verifying the products suitability for sanitary and potable applications.

The WaterMark code continues to provide a safety net for the public, whilst the humble Plate Heat Exchanger continues to provide safe, clean & reliable hot water.



"Barangaroo is one of the most ambitious urban renewal projects in the world today, embodying world-class design excellence and sustainability.

It is one of the world's foremost waterfront renewal projects and showcases Sydney as Australia's gateway to the world.

The 22 hectare, \$6 billion Barangaroo precinct will help redefine the western edge of Sydney Harbour and be a lasting legacy for future generations. Barangaroo will provide space for over 24,000 permanent jobs, generate approximately \$2 billion per annum to the NSW economy and provide over 11 hectares of newly accessible public domain."

Sondex Australia has won the contract for the supply of the Barangaroo District Central Plant room heat exchangers for Lend Lease Australia.

International News Sondex France

Sondex Australia isn't the only Sondex family member making waves around the world.

In December 2014, our sister company Sondex France was awarded a highly sought after contract to supply the Plate Heat Exchangers on two of MSC Cruises newest vessels.

Standing at 315m long, 43m wide and a gross tonnage of approximately 167,600 tonnes, these vessel will have 2,250 cabins for use by guests, 820 for the crew and each will be able to accommodate 5,700 passengers and 1,536 crew members. Production has commenced on these cruise ships at STX France and are due for delivery in 2017 and 2019. There is also an option for an additional 2 ships to be built.

