Water Sample Coolers

Introduction

INTRODUCTION

If there is a requirement to sample hot or boiling waters, the installation of sample coolers is essential for the following reasons.

Safety;

To ensure compliance with health and safety regulations. The health and safety act 1974 requires employers to provide a safe method of sampling water in boiler plants.

Accuracy;

A significant portion of any heated water sample will be lost to atmosphere as steam flashes off which means that the resultant sample will not be representative.

Convenience;

Opening of drain plugs or loosening of pipe can be extremely difficult regardless of the safety hazard.

Two versions are available, one with a copper coil for general use, and one with a stainless coil to comply with any fluids that are incompatible with copper. Also there are fixed or removable coils available

Application;

Sample coolers should be installed whenever it is necessary to obtain a sample of water from a system where the operating temperature exceeds 60 degrs. C i.e. steam boilers, steam and condensate mains. Closed heating circuits, and water systems,

Installation;

The sample cooler should be installed as close as possible to the system take of point at a height to facilitate convenient operation; the unit must be mounted vertical.

An isolating valve capable of withstanding the full system pressure should be installed immediately to the take of point.

The cooling water should be taken to a suitable drain through a tundish

Operation;

1. Open the cold-water inlet valve fully and ensure cooling water is flowing to drain.
2. Open the sample-regulating valve slowly until system water starts to flow, then allow sample to run to waste for a suitable period to purge the stagnant water in the sample line.
3. Regulate the sample flow until a stable temperature of15 degrs. C then collect sufficient volume of water in a suitable container
4. When sample has been acquired close the regulating valve then the cold-water inlet valve.

Maintenance;

Should cooling deteriorate the coil can be removed for inspection by splitting the flange assembly

Specification;

Mild steel outer shell to BS 1387
Welded to BS en 287

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Specification

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Mild steel outer shell to BS 1387

Welded to BS EN 287

Fixed or removable coil

10mm Copper coil table "y" 0.8mm wall thickness.

Suitable to pressures up to an including 16 bar @ 202 degrs C

10mm Stainless coil type 316 1.00mm wall thickness, annealed condition.

Suitable for pressures up to and including 139 bar @ 336 degrs C.

Max. Working pressure for the shell 14 bar

Coolant inlet and outlet $^{1}/_{2}$" b.s.p.

Sample flow controlled by a $^{3}/_{8}$" (10mm) valve. Cooling water by a $^{1}/_{2}$" valve

Flange assembly pn 16 rating

End plates- thickness 6mm

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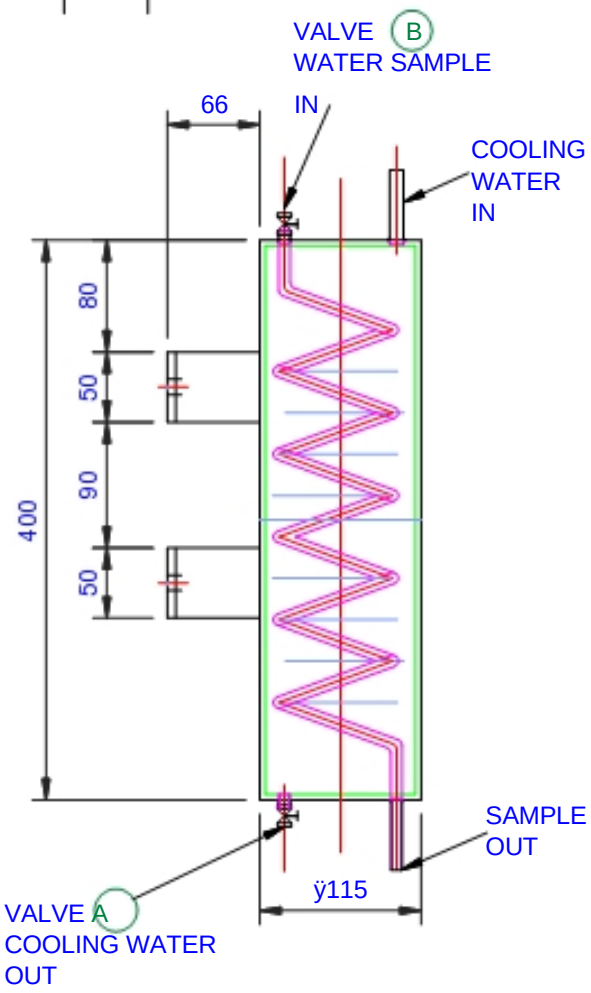
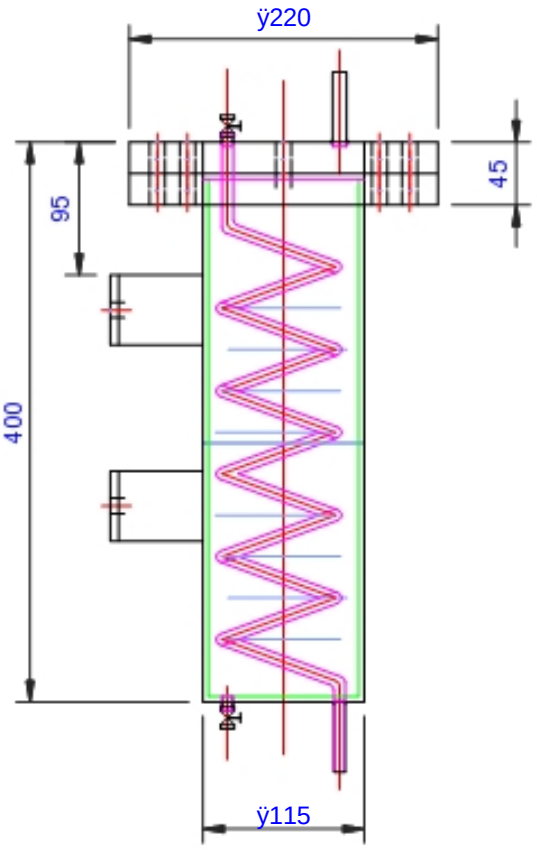
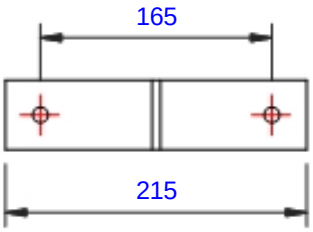
RevNo	Revision note	Date	Signature Checked



FIXED COIL
WATER SAMPLE
COOLER



REMOVABLE
WATER SAMPLE
COOLER



MOUNTING
4 No.ÿ11 HOLES
50x6 FLAT BAR

ALL DIMENSIONS
± 10 mm

DRAWN_BY	CHECKED_BY	APPROVED_BY_DATE	FILENAME	DATE	SCALE
T.M.B. DESIGNS 0114 2347817				12/02/04	N.T.S.

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DRAWING_NUMBER		SHEET
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