

Hendy Coils Pty Ltd

HEAT EXCHANGE COIL SPECIFICATION

Below we offer a sample coil specification that should result in supply of coils with a reasonable balance between initial and running costs, and installation that will not reduce the life of the coils. Where specific parameters are suggested, acceptable ranges are shown in brackets. These specifications could be met by any Australian manufacture of coils utilizing modern machinery and industry standard material without incurring unnecessary costs.

HEATING AND COOLING WATER COILS

Coils shall be selected by the manufacturer to give the scheduled duties at the specified temperatures and flows without unnecessary system resistance. Coils shall be of the extended surface type with tubes staggered in direction of air flow.

Primary surface shall be seamless pure copper tube to A.S.1571 with a safe working pressure in excess of 2000 KPa.

Secondary surface shall be die formed rippled aluminum (copper) and shall incorporate fully drawn collars that completely shroud the copper tubes. Fin spacing shall not exceed 472 fins per meter (236-551). Copper tubes shall be mechanically expanded to obtain a positive primary to secondary interference fit.

Coil frame shall be of adequate thickness to provide rigid mounting and tube holes shall be die formed. Frame material shall be galvanized iron (aluminum, brass or stainless steel). For cooling coils construction shall be such that water cannot collect on any part of the coil.

Welding shall be carried out with copper brazing alloys to A.S.1167. Headers where applicable shall be constructed of hard drawn copper tubes to A.S.1432. Return bends shall be formed from copper tube of gauge equal to or greater than the primary surface.

Unless otherwise scheduled maximum face velocity shall not exceed 3.6m/s (2.6-4.0) for heating coils and 2.6m/s (2.0-2.8) for cooling coils. Water velocities within the core shall not exceed 3.0 m/s. Maximum air pressure drop shall not exceed 60 Pa (20-100) for heating coils and 160 Pa (100-200) for cooling coils.

Coils shall be installed in such a manner as to be removable and air on faces shall be accessible for the purpose of cleaning. Coils of more than one row shall be installed for counter flow operation with water entering at the bottom connection. Heating coils shall not be installed closer than 1000mm to direct expansion cooling coils unless fail safe freeze protection is provided. Pipework shall be arranged such that stress due to expansion and contraction are not transmitted to the coils. Where installed with a drip tray, provision shall be made to ensure the coil frame is not in continuous contact with water.

Coils shall be individually tested and guaranteed leak free to the specified safe working pressure by the manufacturer and shall not be hydrostatically tested with pipework on site.