Alpha Consulting Engineers Pte Ltd

Inspection Check List for Chiller /Condenser Water Pumps Installation

Project : _____ Contractor : _____

Inspection Refer No. : _____ Date : _____

Pump Type and No. : _____

S/N	ITEMS	COMPLIED		REMARKS
		YES	NO	
1	**Pump and pipe works checks**			
1.1	Water pumps, valves and fitting, strainer, flexible connection and accessories delivered and installed in accordance with approval brand, model and capacity			
1.2	Layout of pumps, accessories pipes, valves and fittings are installed in accordance with approval shop drawing			
1.3	Routing of chilled water and condenser water pipes, position of accessories valves and fittings are installed properly in accordance with approval shop drawing and coordinated with other services installation			
1.4	Pressure gauges is installed c/w stop cock at pump suction and discharge side			
1.5	Strainer in the pump inlet pipework and that this strainer contains a clean basket			
1.6	All central plant items and terminals units are isolated to prevent the ingress of debris			
1.7	Anti-vibration mountings is in accordance with approval shop drawing with correct min. deflection and supplier recommendation			
1.8	First three nos. of water pipe supporters/hangers connecting to pump is completed with vibration isolator			
1.9	Flexible pipe connection is properly installed without buckling			
1.10	Alignment checked and satisfactory for pump motor assembly is completed and recorded			
1.11	Adequate space is allowed for access and removal / replacement of major and large components of the pump sets			
1.12	Insulation to chilled and condense water pipes is completed and painted with directional sign and labels			
1.13	Pipe jacketing and painting works are completed and proper directional sign and label provided			
1.14	The pump casing is vented of air			
1.15	Drive guards / protector is fitted			
1.16	Surrounding of pump and control panel clean			
1.17	Labels are provided for all equipment, i.e. pumps, control panels, etc.			

S/N	ITEMS	COMPLIED		REMARKS
		YES	NO	
2	**Electrical checks**			
2.1	Approval type of starter panel installed and correct IP rating			
2.2	Accessories electrical installation such as conduit/trunking/tray and wiring are properly installed with approval materials and complied with specification and SS CP 5, separate inspection may be arranged for inspection with check list No. ACE/CL/A/110			
2.3	All power and control wirings is installed in accordance with the approval shop drawing and circuit diagram			
2.4	Rating of MCB / fuse / protecting RCB is installed in accordance with approval circuit diagram			
2.5	Main power supply cable is installed and tightly terminated to pumps and control panels			
2.6	No unshrouded live components within panels			
2.7	Control panels and switchgear are clean			
2.8	Pump / equipment and surroundings area clean			
2.9	No mechanical damage to switchgear / control panels			
2.10	Internal links / jumper on starter correct			
2.11	Metal cover for cable trunking / conduit junction boxes is installed			
2.12	Wiring and termination of BMS, interfacing with main chiller plant control, etc. are completed and tested, where applicable			
2.13	Supply voltage is checked and correct			
2.14	Supply sequence correct is checked and correct			
2.15	Equipotential bonding copper link is provided for cable tray and trunking			
2.16	Earthing of control is properly connected and terminated			
2.17	No water pipe above control panels			
2.18	Permanent label is provide for control panel, indication lights and push buttons, etc.			
2.19	Single line diagram of control circuit wiring is provided at control panel			
3	**Initial start**			
3.1	Direction of rotation of motor shaft / pump impeller correct			
3.2	Motor, drive and fan are free from vibration or undue noise			
3.3	Motor starting current for sequence timing is adjusted (e.g. star-delta changeover point)			
3.4	No overheating of motor			
3.5	The motor running current is balanced between phases and does not exceed the motor nameplate stated rating			
3.6	The pump inlet pressure is greater than the minimum net positive suction head value recommended by the manufacturer			

Remarks / comments

Conduct by : _____ Company : _____ Date : _____

Signature : _____

Inspect by : _____ Company : _____ Date : _____

Signature : _____

Witness by : _____ Company : _____ Date : _____

Signature : _____

Approve by : _____ Company : _____ Date : _____

Signature : _____

ACEPL