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TECHNICAL DATA SHEET // PI DUCT

WellWall Phenolic Pre-Insulated Duct – QCS 2024 Compliance Statement

دكت فينوليك معزول مسبقا WellWall – بيان المطابقة لمواصفات QCS 2024

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04 Issued by Tawreed Trading & Contracting

DOCUMENT

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Data supplied for submittal and specification purposes. Values are nominal; confirm project-specific requirements with Tawreed before ordering.

S. NO	SPECIFICATIONS	WELLWALL DUCTS
6.2	**DUCTWORK**	
6.2.1	Ductwork Material	
1	All ductwork except in laboratories, kitchens and laundry extract systems shall be manufactured from strip mill, cold reduced sheet, continuously hot dip galvanized in accordance with BS 2989 grade Z2. Unless specified elsewhere in the Project Documentation.	We propose **WELLWALL** pre-insulated duct system fabricated from **WELLWALL** panels and the associated range of accessories.
2	All flanges and stiffeners used in the construction of galvanized mild steel ductwork shall be galvanized steel section.	We propose aluminum profiles.
3	Where flexible ductwork is used, it shall conform to ductwork of the type manufactured in accordance with BS 1470 aluminium strip corrugated and spirally wound with doublelock seam.	
4	The length of flexible ductwork shall not exceed 2 m per section and shall be supported as recommended by the manufacturer.	**WELLWALL** pre-insulated duct system can be fabricated in sections up to 4m length.

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6.2.2	**Ductwork Specification**	
1	Ductwork fabrication and hanging methods shall be as described in the "Equipment" Volume of the American Society of Heating, Refrigerating and Air Conditioning Engineers Guide and Data Book, latest edition, and/or current edition of applicable manuals published by the Sheet Metal and Air Conditioning Contractors National Association Inc., where methods described in these volumes are not at variance with the requirements of any authority having jurisdiction or do not conflict with methods described hereafter. Ductwork shall not be ship fabricated until work has has been job measured and interference situations co-ordinated.	Noted.
2	Any Contractor who is very familiar with British Standards may refer to BS CP 352 and DW 144. Any discrepancy will be clarified by the Engineer on request.	Noted.
	In any event, the standard of work required is the best available, and the 'specifications are to be so interpreted.	Noted.
6.2.3	**Ductwork General**	
1	All dimensions shall be checked on site before ductwork manufacture is commenced.	Comply.
2	The whole of the ductwork installation shall be carried out by an approved specialist in ductwork manufacture and installation. No ductwork shall touch the building 'structure or building finishes direct, but shall be isolated with insulating spacer.	Comply.
3	The fabrication shall be carried out in a neat and workmanlike manner with all ductwork true in size and cross-section, braced and stiffened as specified and with all internal and	Fabricator to comply.

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	external surfaces free from projections and sharp edges.	
4	At each main branch in ductwork and at each fan discharge or suction, provide sufficient number of Pitot tube holes for balancing systems. Also, provide test holes for traverse fan discharge and at all equipment. Test holes shall be located within easy reach of catwalks or ladder. Each test hole shall have 20 mm clear opeing provided with a metal ring place with threaded hole in the boss, and matching screwed head plug. Where these plugs are installed in insulated ductwork, provide an extension collar against which the insulation can be finished.	Comply.
5	Reinforced holes shall be provided where thermometers, manometers, thermostats, gauges, damper rods etc., occur in ductwork. Extended collars shall be provided for the reinforced damper rods etc., occur in ductwork. Where copper tubing passes through ductwork, or casing, provide a rubber grommet 'to prevent damage to copper tubing.	Comply.
6	Ductwork shall be rigidly suspended or supported from building structure. Expansion type concrete inserts shall be placed so that the fastener is in shear rather than tension. Powder actuated fasteners placed by an explosive charge will not be accepted. Angle type trapeze hangers with rod supports space at 2 m maximum shall be used. "C" type beam clamps will not be accepted. Provide necessary steel angle iron required for bracing of ductwork or equipment, and for supporting ductwork from building structure.	Comply.
7	A layer of felts strip 12.5 mm compressed thickness shall be provided between any support member which is designed to clamp or grip the duct (e.g. circular duct duct band clip) or on which the duct is to rest. All supports shall be hot dip galvanized.	Comply.
8	Increase in duct size shall be gradual. Where width or largest dimension of a duct is over 450 mm, duct shall be stiffened by bending in a break across corners in both directions. Ducts shall be self-supporting and complete in themselves. Single thickness partition between ducts	Comply.

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	will not be accepted. Visible internal portions of duct outlets to grilles and registers shall be painted in dull black.	
9	All necessary allowances and provisions shall be made in the installation of the ducts for the structural framing of the building and when changes or offsets are necessary, the required cross-sectional areas shall be maintained. All of these changes however, shall be approved, and installed as directed at the time.	Comply.
10	During installation, the open ends of ducts shall be protected with blank, flanged sheet metal baffles, securely attached to prevent debris and dirt from entering.	Comply.
11	Where ducts are shown connecting to masonry openings and/or along the edges of all plenums at floors, walls, etc., provide a continuous 30 x 30 x 4 mm galvanized angle iron which shall be bolted to the structure and made airtight to same by applying caulking compound on the angles before they are drawn down tight. The sheet metal at these locations shall be bolted to the angle iron framing.	Comply.
12	All air ducts, casings, plenums etc., shall be constructed of lock forming quality prime galvanized steel sheets, which are free from blisters, slivers, pits, imperfectly coated spots etc. No second quality sheet metal allowed.	Fabricator to comply with **WELLWALL Phenolic**
13	Where damage (or rusting) has occurred on galvanized ductwork, the affected section shall be made good by painting with two coats of zinc-rich paint and approved finishing paint, or where the damage in the Engineer's opinion cannot be made good, then a new section of ductwork shall be provided at no cost to the contract.	Comply.
14	Duct shall be constructed using double or Pittsburgh lock corner seams. All seams shall be hammered down and made airtight by applying sealant before hammering down. For	Longitudinal seams are closed with special foam glue and covered by aluminum tapes.

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	transverse joints, refer to the current ASHRAE guide for low pressure ductwork.	Transverse joints by aluminum invisible flange with slide in PVC H bayonet.
15	Support the vertical ducts installed in the various shafts at each floor level with galvanized supporting irons of approved size	Comply.
16	Install these angles across the width of the shaft, with their ends attached to angle irons securely anchored into the masonry walls of the shaft, or attached to the framing of the floor openings. The ducts shall be bolted to these supporting angle irons.	Comply.
17	Ensure that all openings required through floors, walls, partitions etc., for the duct system are provide in the exact location required.	Comply.
18	Each piece of ductwork shall be wiped inside and out before installation and all open ends shall be capped and sealed to prevent entrance of dirt during construction. Ensure that ductwork systems are clean and free from dirt, dust, grime, debris etc., before initial operation of fans. Fans shall not be operated until the filters are installed and approved from the Engineer has been obtained.	Comply.
19	The bottom joint and 150 mm of vertical joint on outside air intake ducts and mixing chamber ducts shall be soldered and made watertight. Provide drain connection and run copper drain pipe to nearest floor drain.	Comply.
20	All fixing devices including nuts, bolts, washers etc., used in the construction or support of galvanized ductwork shall be sheradised, or cadmium-plated.	Comply.
21	Final connections to diffusers shall be carried out using flexible ductwork or solid spigots as detailed in the Project Documentation.	Comply.

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22	Sealants, gaskets and tapes shall comply with DW 144 Part 7 section 27 or DW 151 section 12 as appropriate.	We propose WELLWALL DUCTS Acrylic sealant. No gasket is required.
6.2.4	**Low Pressure Ductwork**	
1	This applies to ductwork with mean velocities less than 10 m/s and static pressures of 500 Pa or less.	Noted.
2	Rectangular low pressure ductwork shall be fabricated from prime quality, re-squared, tight coat galvanized steel sheets as specified in the relevant standard.	Fabricator to comply with WELLWALL panels.
3	Reinforcing and joints shall be in accordance with ASHRAE Guide and Data Book, Equipment Volume, 1988 Chapter 1 or in accordance with DW 144.	Fabricator to follow WELLWALL DUCTS construction standard.
4	Low pressure suction and discharge plenum chambers shall be fabricated from 1.3mm galvanized steel with galvanized angle iron framework and bracing	Fabricator to comply with WELLWALL panels.
5	In square elbows and in elbows where the radius is less than 1.5 times the width of duct, sheet metal deflector vanes shall be installed the full height of the duct, being securely riveted in place. All vanes shall be double thickness vanes of two gauges heavier than the duct in which they are installed, and shall be factory made, not site fabricated. Vanes shall be tack welded to vane rail. For vane lengths over 1000 mm, tack weld vanes to 10 mm tie-rod at mid-span.	Fabricator to comply with vanes fabricated from WELLWALL panels. fixed by means of glue and tape.
6.2.5	**Medium Pressure Ductwork**	
1	This clause applies to ductwork subject to pressures up to 1000 Pa.	Noted.

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2	Rectangular medium pressure ductwork shall be fabricated from prime quality, re-squared tight coated galvanized steel sheet as specified in the DW 144.	Fabricator to comply with WELLWALL panels.
3	Reinforcement and joints shall be as detailed in DW 144.	Fabricator to follow WELLWALL DUCTS construction standard.