

Planning and esecution of Mechanical and electric system – Mask Shop Agrate

Aertecno International and Takenaka Europe

for

DNP Dai Nippon Printing Co. Ltd.

and

STMicronics

Mask Shop – Agrate Brianza Project



Revision	Description	Elaborate	Verified	Approved	Date
0	First iussue	RQ	DG	DG	03.09.03

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Scope of Supply

Scope of this offer is to define the requirements for the M & E installation inside the buildings of the DNP in AGRATE - ITALY.

The scope of supply includes the following:

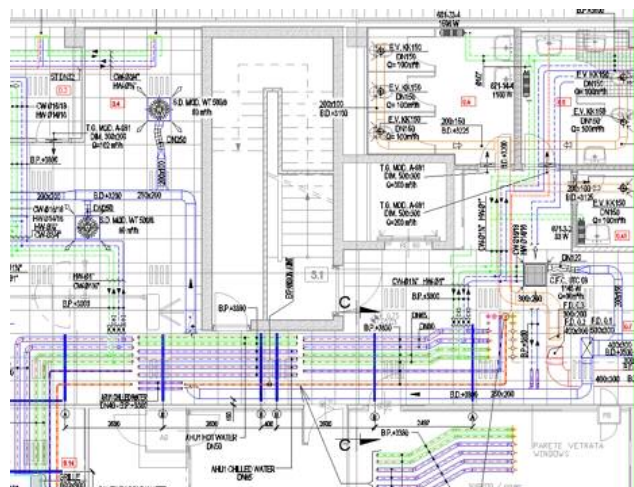
- Fabrication engineering relevant to the ducting system, electrical system and control system.
- Installation of M & E.
- Purchasing and fabrication, installation, testing and balancing up to the final acceptance of the following components and equipment:



- all Hvac equipment
- air supply and exhaust ductwork including all accessories incidental thereto ductwork insulation;
- heating, ventilating and air-conditioning control system including all component instruments, accessories
- sanitary system
- fire fighting system and fire detection
- electrical works
- telephone work (excluded telephone apparatus) and data work
- Construction, precommis., commissioning.
- Quality assurance and quality control

Documentation provided

- Engineering flow schemes.
- Design criteria and data summary.
- Layout and location drawings for each plant building. Drawings shall be on a scale not less than 1:50.
- Electrical power supply, distribution drawings and control alarm schemes
- Start-up, shutdown, troubleshooting and regular maintenance procedures.
- Operating and maintenance manuals
- Technical data books.
- Certification of declaration that all the systems in according to Italian law.



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HVAC System

System included:

- Chilled water distribution:
Offices air handling unit cooling coil – fan coil units – air recycling units
- Hot water distribution:
Offices air handling unit heating coil – fan coil units – radiators

They are realized by an installation located in the utility room at ground level which will be composed of the water pumps.

Office area air conditioning is based on a 4 pipes fan coil units system.

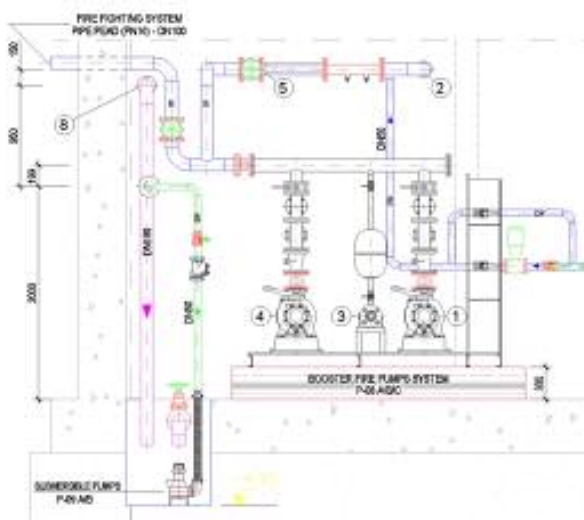
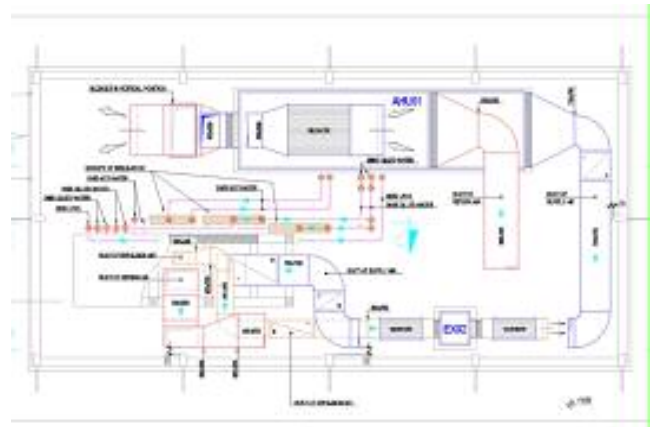
A central air handling unit located on roof provides the needed fresh air rates.

Computer room and LV Switchgear are cooled by some air recycling units.

Only heating is foreseen for other rooms as follows:

- radiators with thermostatic valves for toilets, stairs and corridor and utility rooms

Transformer rooms/MV switchgear are ventilated to maintain inside the rooms a temperature max 5°C increase of outdoor.



Plumbing System

City water is supplied by ST inside the building. After the flow meter a booster pumps system with related tank is needed to assure a constant pressure level on the equipments.

City water distribution supplies toilets, emergency shower and other needs.

Waste waters is collected into a septic tank (excluded), the outlet of which is connected to the ST North sewer.



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