CLAIMS

1.- A metal structure (10, 110) for supporting fluid ducts, comprising:

- substantially vertical uprights (12), arranged in a regular horizontal mesh characterized by a first longitudinal direction (X) and a second transverse direction (Y), and

- a plurality of longitudinal beams (14) and of transverse beams (16), arranged respectively in longitudinal and transverse directions, each beam connecting two consecutive uprights,

the plurality of longitudinal beams comprising at least a first level (22) of longitudinal beams, arranged along a first horizontal plane (36), said first level being capable of supporting a first transverse duct (40) extending in the transverse direction;

the plurality of transverse beams comprising at least one second level (30) of transverse beams, arranged along a second horizontal plane (38), said second level being capable of supporting a second duct (42) extending in the longitudinal direction; the second horizontal plane being located above the first horizontal plane;

the structure being devoid of longitudinal beams on the second horizontal plane (38), said second horizontal plane thus being capable of being passed through by the first duct (40) above the longitudinal beams (14) of the first level (22);

wherein each of the uprights (12) includes an upper end provided with means (21) for suspension from a chassis (140), said means allowing to fix the metal structure (10, 110) rigidly to said chassis.

2.- The metal structure according to claim 1, wherein:

- the plurality of longitudinal beams comprises a third level (24) of longitudinal beams arranged in a third horizontal plane (44), located above the second horizontal plane (38); and

- the structure is devoid of transverse beams at said third horizontal plane, said third horizontal plane thus being capable of being passed through by the second duct (42) above the transverse beams of the second level (30).

3.- The metal structure according to claim 1 or claim 2, including several levels (22, 24, 26) of longitudinal beams and several levels (30, 32, 34) of transverse beams, vertically alternating.

4.- The metal structure according to one of the preceding claims, further comprising at least one grid (18, 58) of longitudinal bars (50) and transverse bars (52), arranged respectively in the longitudinal (X) and transverse (Y) directions, each bar connecting two consecutive uprights (12), the longitudinal bars and transverse bars of said grid being coplanar and located above the plurality of longitudinal beams and transverse beams.

5.- The metal structure according to claim 4, wherein the at least one grid includes at least one cross-shaped reinforcement (54), each end of said reinforcement being fixed to the middle of a longitudinal bar (50) or a transverse bar (52).

6.- An industrial facility (120) comprising:

- a network (130) of channels (132), extending in three dimensions,
- a main chassis (140) mechanically connected to said network (130), and
- at least one metal structure (10, 110) according to one of the preceding claims, said metal structure being fixed to the main chassis;

said network of channels comprises at least one fluid duct (42, 134) extending in the longitudinal direction (X) and supported by at least one transverse beam (16) of said metal structure (10, 110), and/or at least one fluid duct (40, 136) extending in the transverse direction (Y) and supported by at least one longitudinal beam (14) of said metal structure.

7.- The facility according to claim 6, wherein at least one of the channels (132) of said network (130) comprises at least a longitudinal portion (134) and a transverse portion (136), respectively extending in the longitudinal and transverse directions, said portions being connected by at least one vertical duct (137) delimited by two elbows (138),

the at least one longitudinal portion (134) and the at least one transverse portion (136) respectively being supported by at least one transverse beam (16) and by at least one longitudinal beam (14) of the at least one metal structure.

8.- The industrial facility according to claim 6 or claim 7, wherein the at least one metal structure (10, 110) is according to claim 4 or claim 5, said facility further comprising electric or instrumentation cables, deployed on the at least one grid (18, 58).

9.- The industrial facility according to one of claims 6 to 8, wherein the at least one metal structure (10, 110) is suspended from the main chassis (140).