

does not overflow through the hanger path (12), rather the condition occurs in which the air is introduced into the inside of the booth (11).

The vacuum zone at or below the hanger path (12) can be produced by other provisions. Several such provisions are shown in FIG. 3 to FIG. 6.

In FIG. 3, the provision is constructed, such that, two elongated pipes (30) are mounted on the lower surface of ceiling (31) of a spray booth (32) along and adjacent to a hanger path (33) and each elongated pipe (30) is provided with spray apertures (34) on the lower surface thereof, whereby a pressurized fluid which passes through the elongated pipe (30) flows downward in an arrow direction into the spray booth (32) thus producing the vacuum zone at or below the hanger path (33).

In FIG. 4 and FIG. 5, the provision is constructed, such that, an upper portion (40a) of a spray booth (40) is separated by a pair of longitudinal partition plates (42) which laterally extend toward suspended hangers (43) from vertical walls of the spray booth (40) while forming a second hanger path (44) therebetween besides a first hanger path (45) and two ducts (46) are communicably attached to the upper portion (40a) of the spray booth (40) so as to spray pressurized fluid from the duct (46) into a lower main chamber (40b) of the booth (40) through the second hanger path (44), whereby a vacuum zone is produced at or below the first hanger path (45) due to the supply of the pressurized fluid.

Of course, as shown in FIG. 5, the above provision can be coupled with the provision of FIG. 2 by inclining a U-shaped jet pipe (47) toward the inside to enhance the degree of vacuum in the vacuum zone.

In FIG. 6, the provision is constructed, such that, two elongated pipes (50) are mounted on the lower surface of a ceiling (51) of a spray booth (52) along and parallelly spaced-apart from a hanger path (53), two fluid guides (54) are also mounted on the lower surface of the ceiling (51) of the spray booth (52) along and adjacent to the hanger path (53), and the fluid guides (54) are positioned and shaped so as to direct a flow of a pressurized fluid from the pipes (50) in a downward direction.

As has been described heretofore, the spray booth assembly provides the advantages that because the moisture in the booth does not spread beyond the hanger path and the conveyor is not in the closed part, the conveyor is protected from rust and deterioration, the life of the conveyor may be remarkably extended, poor coating due to dripping of lubricant and water is prevented, and the structure is simplified, and that inspection and maintenance are easily performed because of lighting available through the open hanger path.

Especially, in the coating line in which heating and cooling are repeated, this device largely contributes to the life extension of the conveyor.

What we claim:

1. A spray booth assembly for washing or chemically treating objects of desired kind comprising

(a) a spray booth having an open-type tunnel-like construction, said spray booth provided with a longitudinal slit opening on a ceiling thereof said longitudinal slit opening forming a hanger path,

(b) a hanger conveying means disposed above said ceiling of said spray booth in alignment with said hanger path,

(c) a plurality of vertical hangers movably suspended through said hanger path down into said spray booth from said hanger conveying means at desired intervals, said each hanger a lower extremity thereof provided with an object to be sprayed,

(d) spray means disposed within said spray booth for spraying water or other chemical solvent onto said object to be sprayed, and

(e) means for producing a vacuum zone at or below said hanger path, whereby said spray booth assembly can prevent the water or chemical moisture from flowing out through said hanger path toward said hanger conveying means.

2. A spray booth assembly according to claim 1, wherein said vacuum zone producing means is constructed such that, a plurality of U-shaped spray pipes are disposed longitudinally within said spray booth at desired intervals for providing said spray means and said each spray pipe has two parallelly-disposed vertical portions curved toward the inside as said vertical portions approaches to said ceiling of said spray booth and spray nozzles are attached to said curved portions of said spray pipes making the spraying direction thereof directed in a slantly downward direction.

3. A spray booth assembly according to claim 1, wherein said vacuum zone producing means is constructed, such that, at least one elongated pipe is mounted on the lower surface of said ceiling of said spray booth along and adjacent to said hanger path and said elongated pipe is provided with spray apertures on the lower surface thereof, whereby a pressurized fluid which passes through said elongated pipe flows downward in said spray booth thus producing said vacuum zone at or below said hanger path.

4. A spray booth assembly according to claim 1, wherein said vacuum zone producing means is constructed, such that, an upper portion of said spray booth is separated by a pair of longitudinal partition plates which laterally extend toward said suspended hangers from vertical walls of said booth while forming a second hanger path therebetween and at least a duct means is communicably attached to said upper portion of said spray chamber so as to spray pressurized fluid from said duct into a lower main chamber of said booth through said second hanger path, whereby a vacuum zone is produced at or below said hanger path due to said supply of said pressurized fluid.

5. A spray booth assembly according to claim 1, wherein said vacuum producing means is constructed, such that, at least one elongated pipe is mounted on the lower surface of said ceiling of said spray booth along and parallelly spaced-apart from said hanger path, at least one fluid guide means is mounted on said lower surface of said ceiling of said spray booth along and adjacent to said hanger path, and said fluid guide is positioned and shaped so as to direct a flow of a pressurized fluid from said pipe in a downward direction.

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