

ABSTRACT OF THE DISCLOSURE

Safety Mechanism Employable in Abrasive Suspension Jet Machine

A machine comprises a main pipe (2) connecting a high-pressure pump (1) and a nozzle (3) with each other, a pressure pipe (4) connecting high-pressure pump (1) and an upper portion of a tank (5) with each other, an abrasive supply pipe (7) connecting a lower portion of tank (5) and main pipe (2) with each other and a decompression pipe (8) connected to the upper portion of tank (5) as well as a decompression valve (9), a small-diametral portion (17) and an outlet (10) successively connected to decompression pipe (8). High-pressure fresh water (13) is stored in the upper portion of tank (5). High-pressure high-concentration water (12) containing an abrasive in a high concentration is stored in the lower portion of tank (5). Machining water (16) containing the abrasive is sprayed from nozzle (3) onto a workpiece (15) at a high speed. In case of emergency, decompression valve (9) is opened. Thus, fresh water (13) is discharged from the upper portion of tank (5) successively through decompression pipe (8), decompression valve (9), small-diametral portion (17) and outlet (10). Consequently, tank (5) is decompressed.

Figure 1