OSM/IN DECISION

Standard:	IEC/EN 60529	Sub clause:	14.2.5 & 14.2.6	Sheet N°:	OSM/IN 279
Subject:	IPX5 & IPX6	Key words:	**-** standard test nozzle **-** stream water diameter	**Meeting N°** **Inquiry**	25 (2015) OSM_IN(Inq)-099_2014

Question:
In the conditions to be observed of clause 14.2.5, Test for second characteristic numeral 5 with the 6,3 mm nozzle and clause 14.2.6, Test for second characteristic numeral 6 with the 12,5 mm nozzle, how to verify the requirement for the stream water diameter ?

Proposal:
The test is made by spraying the enclosure from all practicable directions with a stream of water from a standard test nozzle as shown in figure 6.
For the IPX5, the conditions to be observed shall be read as follows
- internal diameter of the nozzle: 6,3 mm;
- delivery rate: 12,5 l/min ± 5 %;
- water pressure: to be adjusted to achieve the specified delivery rate;
- core of the substantial stream: circle of **not more than** 40 mm diameter at 2,5 m distance from nozzle;
- test duration per square metre of enclosure surface area likely to be sprayed: 1 min;
- minimum test duration: 3 min;
- distance from nozzle to enclosure surface: between 2,5 m and 3 m.

For the IPX6, the conditions to be observed shall be read as follows
- internal diameter of the nozzle: 12,5 mm;
- delivery rate: 100 l/min ± 5 %;
- water pressure: to be adjusted to achieve the specified delivery rate;
- core of the substantial stream: circle of **not more than** 120 mm diameter at 2,5 m distance
- from nozzle;
- test duration per square metre of enclosure surface area likely to be sprayed: 1 min;
- minimum test duration: 3 min;
- distance from nozzle to enclosure surface: between 2,5 m and 3 m

Explanatory Notes:
As all the critical dimensions of the hose nozzle are defined by the standard and the water pressure shall
be regulated in order to achieve the specified delivery rate, the stream water diameter is fixed.
Therefore, we don't need to carry out any strict measurement of the stream water diameter and the verification of the stream water diameter, by pass / fail criteria, as a maximum, is enough.
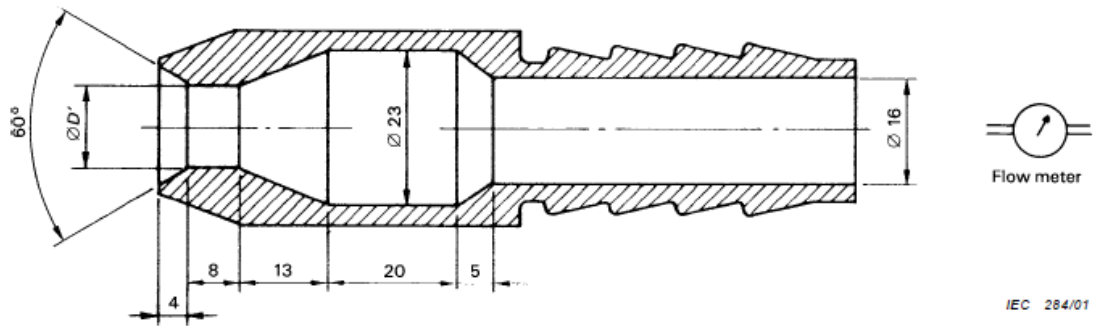
D′ = 6,3   for the test of 14.2.5 (second characteristic numeral 5)
D′ = 12,5   for the test of 14.2.6 (second characteristic numeral 6)

Figure 6 – Test device to verify protection against water jets (hose nozzle)