CLAIMS

1. A method for liquid cooling of an electric motor (1; 2; 3) of inner rotor type comprising a rotor (10; 110; 210) of hub type and a stator provided with windings (30), ~~**characterized by**~~ comprising the steps of:

- supplying (S1) a cooling liquid (O) for said cooling to at least one end of the hub (20; 120; 220) of said rotor;
- feeding (S2) supplied cooling liquid (O) at least radially in said hub (20; 120; 220) by means of the rotation of said hub (20; 120; 220), and
- by means of the rotation of the rotor (10; 110; 210) throwing (S3) thus fed cooling liquid (O) towards said stator (30), **characterized in** that said hub (20; 120; 220) comprises an internal liquid collecting surface (25, 26; 125, 126; 225) for retaining of the cooling liquid for said feeding of the cooling liquid in said hub (20; 120; 220).

2. A method according to claim 1, wherein said rotor (10; 110; 210) comprises peripherally arranged feeding spaces (40, 42; 140, 142; 240) for said cooling liquid (O) from which said liquid (O) is thrown towards said stator (30).

3. A method according to claim 1 or 2, wherein said liquid (O) is thrown towards an end portion of the stator (30) comprising the coil ends (32a) of the stator windings (32).

~~4. A method according to any of claims 1-3, wherein said hub (20; 120; 220) comprises an internal liquid collecting surface (25, 26; 125, 126; 225) for retaining of the cooling liquid for said feeding of the cooling liquid in said hub (20; 120; 220).~~

~~5.~~ 4. A method according to ~~claim 4~~ any of claims 1-3, wherein said internal liquid collecting surface (25, 26) runs internally and axially tapering in the direction from said end.

~~6.~~ 5. A method according to ~~claim 4 or 5~~ any of claims 1-4, wherein said liquid collecting surface (25, 26) is essentially conical.

~~7.~~ 6. A method according to ~~claim 4~~ any of claims 1-5, wherein said internal liquid collecting surface (125, 126; 225) comprises a rim (127, 128; 227) running at said end for said retention.

~~8.~~ 7. A device (I; II; III) for liquid cooling of an electric motor (1; 2; 3) of inner rotor type comprising a rotor (10; 110; 210) of hub type and a stator (30) provided with windings, ~~**characterized by**~~ said device comprising means (50) for supplying a liquid (O) for said cooling to at least one end of the hub (20; 120; 220) of said rotor and means (40, 42; 140, 142; 240) for feeding supplied cooling liquid (O) at least radially in said hub (20; 120; 220) by means of the rotation of said hub (20; 120; 220), and by means of the rotation of the rotor (10; 110; 210) throw thus fed cooling liquid (O) towards said stator (30), **characterized by** that said hub (20; 120; 220) comprises an internal liquid collecting surface (25, 26; 125, 126; 225) for retaining of the cooling liquid for said feeding of the cooling liquid in said hub (20; 120; 220).

~~9.~~ 8. A device according to claim ~~8~~ 7, wherein said rotor (10; 110; 210) comprises peripherally arranged feeding spaces (40, 42; 140, 142; 240) for said liquid (O) from which said liquid (O) is thrown towards said stator (30).

~~10.~~ 9. A device according to claim ~~8 or 9~~ 7 or 8, wherein said liquid (O) is arranged to be thrown towards an end portion of the stator (30) comprising the coil ends (32a) of the stator windings (32).

~~11. A device according to any of claims 8-10, wherein said hub (20; 120; 220) comprises an internal liquid collecting surface (25, 26; 125, 126; 225) for retaining of the cooling liquid for said feeding of the cooling liquid in said hub (20; 120; 220).~~

~~12.~~ 10. A device according to ~~claim 11~~ any of claims 7-9, wherein said internal liquid collecting surface (25, 26) is arranged to run internally and axially tapering in the direction from said end.

~~13.~~ 11. A device according to ~~claim 11 or 12~~ any of claims 7-10, wherein said liquid collecting surface (25, 26) is essentially conical.

~~14.~~ 12. A device according to ~~claim 11~~ any of claims 7-11, wherein said internal liquid collecting surface (125, 126; 225) comprises a rim (127, 128) running at said end for said retention.

~~15.~~ 13. A platform (P) comprising a device according to any of claims ~~7-14~~ 7-12.