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Project/archive no. 3B061930	Date 20.03.2012	Rev. date	No. of pages 9	Appendixes	Classification Restricted	Author(s) Geir Lippe Stavnes
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Assignment Report

Testing of kitchen and basin mixers from Tapwell AB.

Test method NS-EN 817, Clause 10.6 and 14.


Sanitary laboratory

The test results are valid exclusively for the tested objects.

Summary			
<p>SINTEF Building and Infrastructure has, on behalf of Tapwell AB, carried out testing of kitchen and basin mixers, type STR071, STO071, RT184, FME181 and EVO200.</p> <p>The tests have been carried out in accordance with NS-EN 817:2008 "Sanitary tapware – Mechanical mixing valves (PN 10) - General technical specification", Clauses 10.6 and 14. See Table 4.1 for conducted tests.</p> <p>Result: Passed</p> <p>Remark: The flow rate measured at 0,3 MPa shall be at least 0,15 l/s when the tap is supplied with flexible hoses and 0,20 l/s when the tap is supplied with copper pipes. According to NS-EN 817:2008, a flow rate of 0,066 l/s is permissible for water saving valves if appropriate information is provided. In this case, EVO 200 must have this information.</p>			
Address of the building			Built (year)
	Method NS-EN 817	Keywords Tap ware	Filename 3B061930 Tapwell EN817

1. INTRODUCTION

SINTEF Building and Infrastructure has, on behalf of Tapwell AB, carried out testing of kitchen and basin mixers, type STR071, STO071, RT184, FME181 and EVO200.

The tests according to NS-EN 817 were conducted by Geir Lippe Stavnes.

2. TEST METHOD

The tests have been carried out in accordance with NS-EN 817:2008 ” *Sanitary tapware – Mechanical mixing valves (PN 10) - General technical specification*”, Clause 10.6 and 14. See Table 4.1 for conducted tests.

3. TEST OBJECT

The test objects from Tapwell AB are kitchen and basin mixers, see Table 3.1 and Figures 3.1, 3.2, 3.3, 3.5 and 3.7.

The mixers were tested with selected aerators, se Table 3.1 and Figures 3.4, 3.6 and 3.8.

The mixers were delivered to SINTEF Building and Infrastructure by post on 27.2.2012. They were in good condition on arrival.

Table 3.1: Controlled mixers

Mixer	Number	Figure	Supply pipe	Aerator used for test
STR071	3	3.1	Parinox	-
STO071	3	3.2	Parinox	-
RT184	3	3.3	Parinox	Neoperl PCA yellow
FME181	3	3.5	Parinox	Neoperl Z light blue
EVO200	3	3.7	Copper	Neoperl D light grey



Fig. 3.1: STR071



Fig. 3.2: STO071

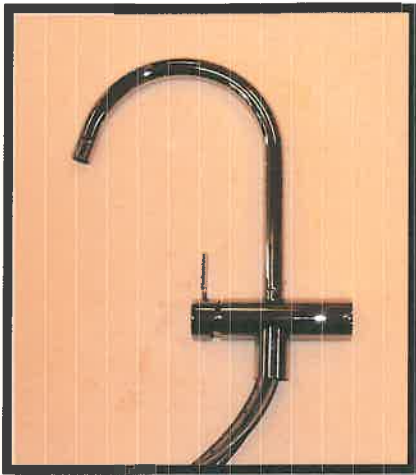


Fig. 3.3: RT184



Fig. 3.4: Neoperl PCA yellow



Fig. 3.5: FME181



Fig. 3.6: Neoperl Z light blue



Fig. 3.7: EVO200

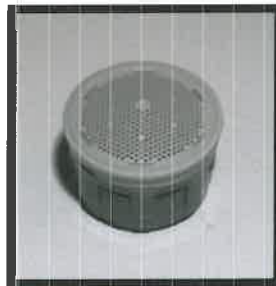


Fig. 3.8: Neoperl D light grey

TESTS, METHOD, REQUIREMENTS AND RESULTS

Table 4.1: Summary of results

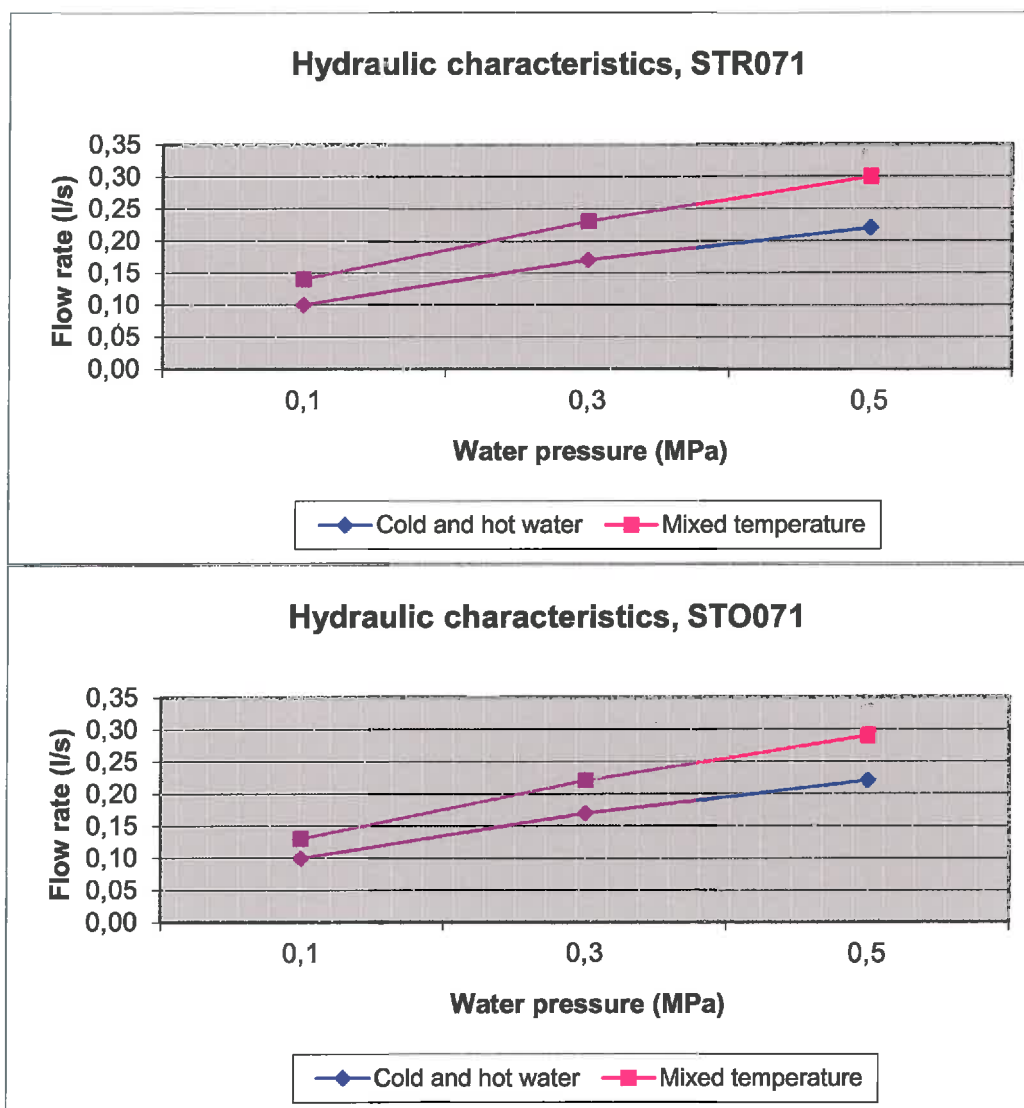
Chapter	Clause in NS-EN 817	Test	Passed		Accredited test	
			Yes	No	Yes	No
4.1	10.6	Determination of flow rate	x		x	
4.2	14	Acoustic characteristics	x		x	

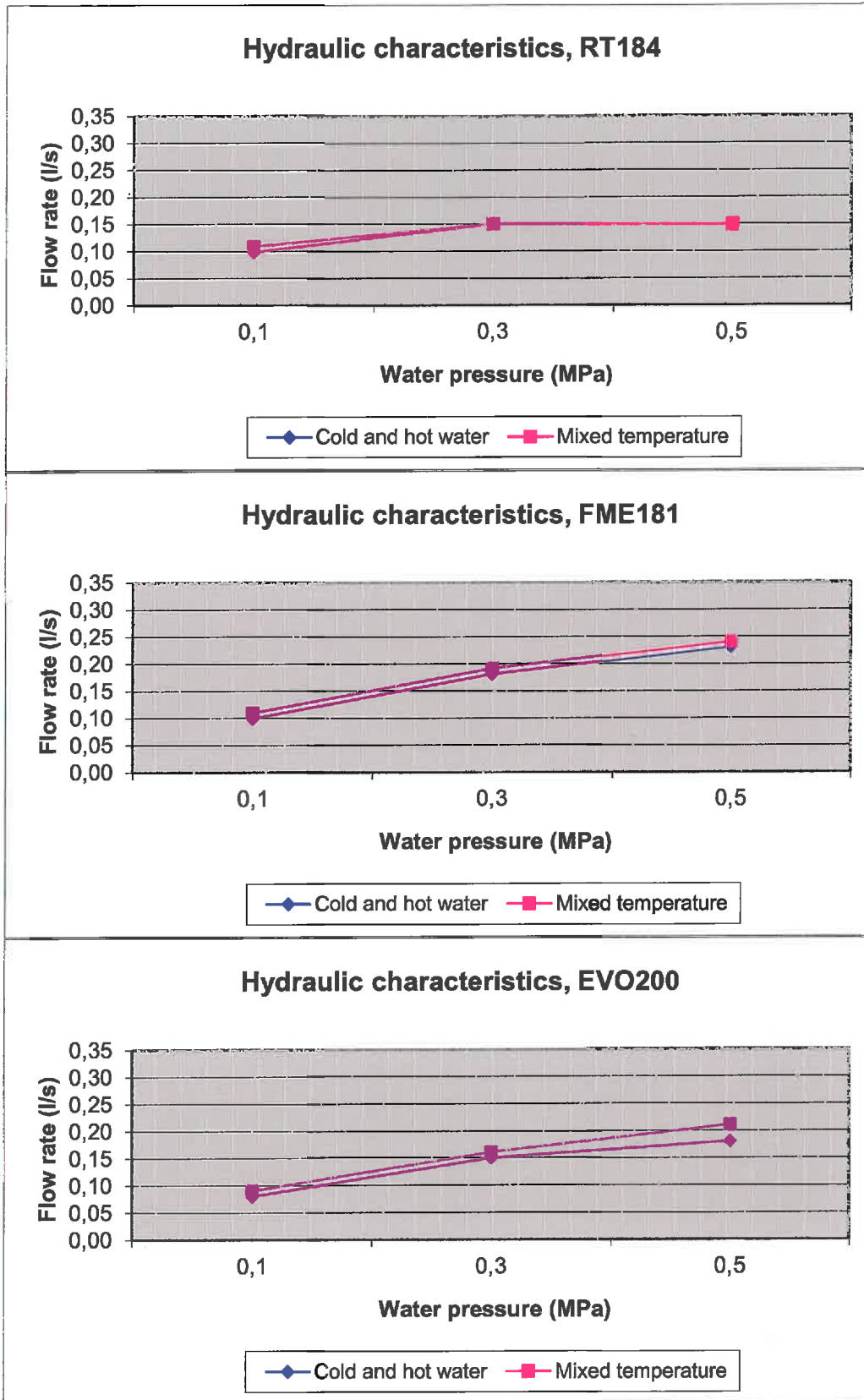
4.1 Determination of flow rate (NS-EN 817, Clause 10.6)

Method: Measuring the flow rate at 0,3 MPa

Mixer	Passed	Not passed
STR071	x	
STO071	x	
RT184	x	
FME181	x	
EVO200	x	

Remark: The flow rate measured at 0,3 MPa shall be at least 0,15 l/s when the tap is supplied with flexible hoses and 0,20 l/s when the tap is supplied with copper pipes. According to NS-EN 817:2008, a flow rate of 0,066 l/s is permissible for water saving valves if appropriate information is provided. In this case, EVO 200 must have this information.



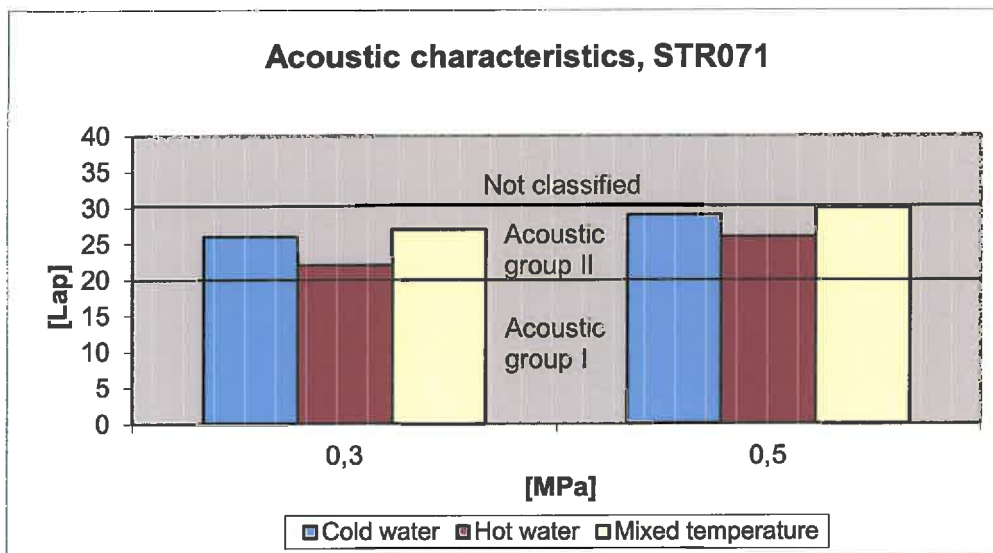


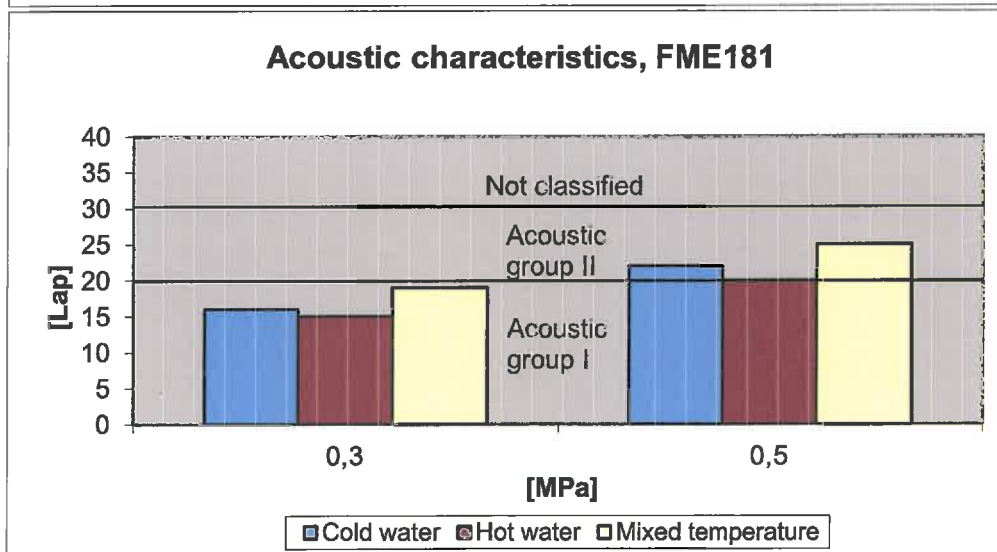
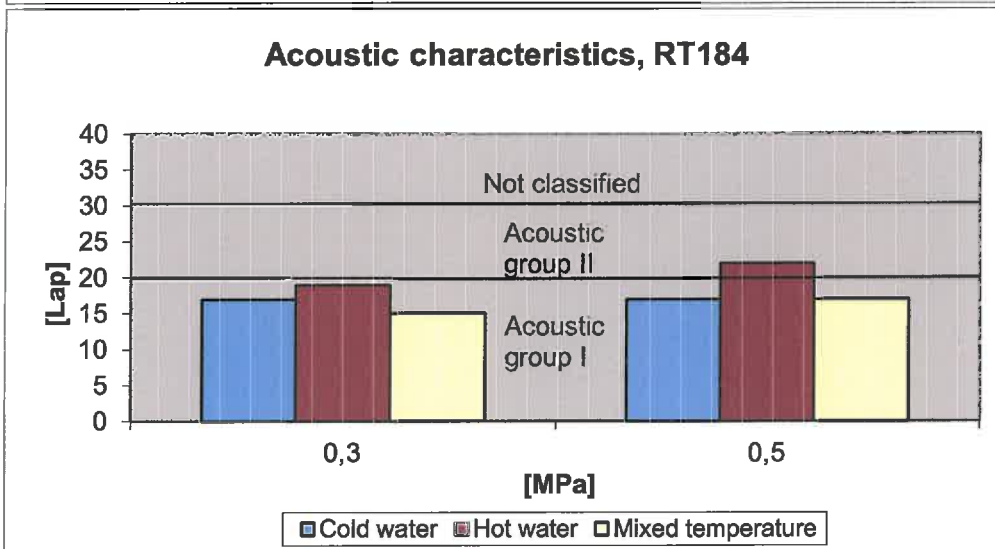
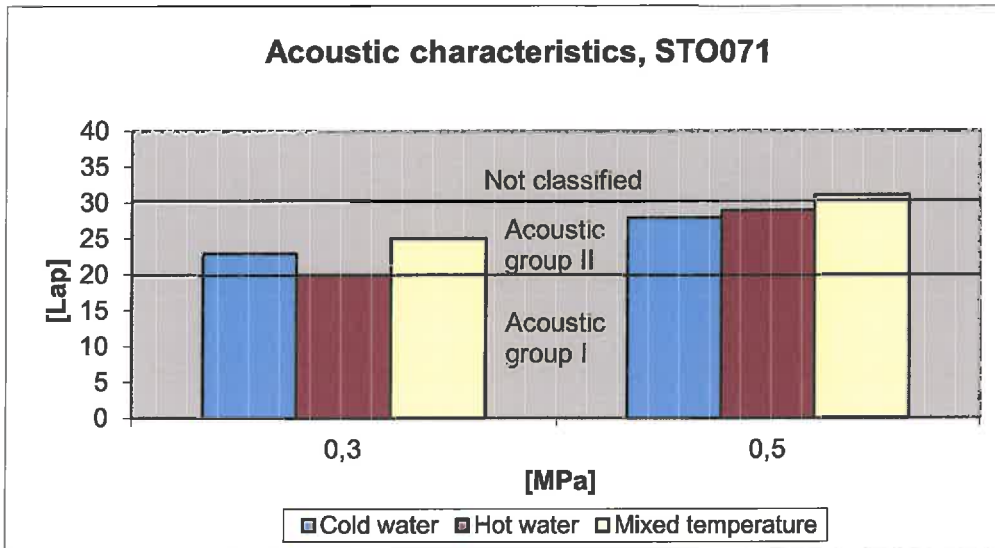
4.2 Acoustic characteristics (NS-EN 817, clause 14)

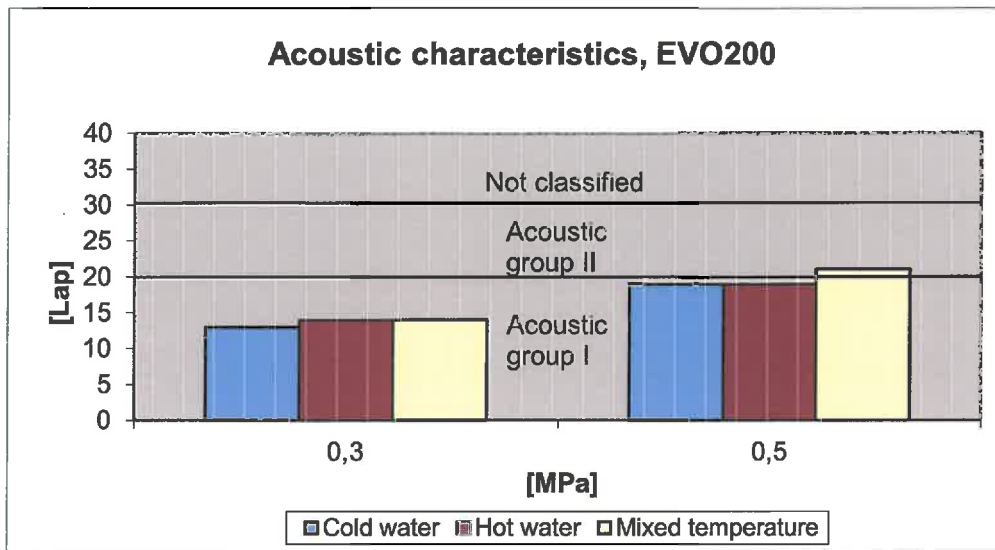
Method: EN ISO 3822

Mixer	Acoustic group			0,3 MPa			0,5 MPa		
				Cold	Hot	Mixed	Cold	Hot	Mixed
STR071	II	Fully open	L _{ap}	26	22	27	29	26	30
			l/s	0,17	0,17	0,23	0,22	0,22	0,30
		Max sound pressure	L _{ap}	26	22	27	29	26	30
			l/s	0,17	0,17	0,23	0,22	0,22	0,30
STO071	II	Fully open	L _{ap}	23	20	25	28	29	31
			l/s	0,17	0,17	0,22	0,22	0,22	0,29
		Max sound pressure	L _{ap}	23	20	25	28	29	31
			l/s	0,17	0,17	0,22	0,22	0,22	0,29
RT184 ¹⁾	I	Fully open	L _{ap}	17	19	15	17	22	17
			l/s	0,15	0,15	0,15	0,15	0,15	0,15
		Max sound pressure	L _{ap}	17	19	15	17	22	17
			l/s	0,15	0,15	0,15	0,15	0,15	0,15
FME181 ²⁾	I	Fully open	L _{ap}	16	15	19	22	20	25
			l/s	0,18	0,18	0,19	0,23	0,23	0,24
		Max sound pressure	L _{ap}	16	15	19	22	20	25
			l/s	0,18	0,18	0,19	0,23	0,23	0,24
EVO200 ³⁾	I	Fully open	L _{ap}	13	14	14	19	19	21
			l/s	0,15	0,15	0,16	0,18	0,18	0,21
		Max sound pressure	L _{ap}	13	14	14	19	19	21
			l/s	0,15	0,15	0,16	0,18	0,18	0,21

- 1) Tested with Neoperl PCA yellow
- 2) Tested with Neoperl Z light blue
- 3) Tested with Neoperl D light grey







Oslo, 20.03.2012
 SINTEF Building and Infrastructure

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