10 ¹² -		-		-	M_0 =1.2e+10 Nm f_c =38.7 Hz n =1.4 err =0.10	_	$M_0=3.1e+10 \text{ Nm}$ $f_c=26.4 \text{ Hz}$ $n=1.4$ $err=0.08$	_	M ₀ =5.0e+10 Nm f _c =14.4 Hz n=1.2 err=0:13		M_0 =1.5e+10 Nm f_c =47.3 Hz n =1.8 err =0.06	-	M ₀ =4.9e+10 Nm f _c =31.6 Hz n=1.4	M_0 =1.4e+10 Nm f_c =39.1 Hz n =1.8 err =0.13
10 ¹⁰ -	2018156105500IMS00	000(20	018156132827IMSC	0000	2018157010141IMS00	0000	2018157013858IMS00	000	2018157121700IMS000	0000	2018158072013IMS0000	00(2018158204112IMS00000	2018159000959IMS00000
10 ¹² - 10 ¹⁰ -	M ₀ =7.0e+09 Nm f _c =47.6 Hz n=1.6 err=0.10	-	M ₀ =3.3e+10 Nm f _c =36.7 Hz n=1.4 err=0.11	-	M ₀ =3.9e+10 Nm f _c =33.9 Hz n=1.6 orr=0.11	_	M ₀ =1.3e+10 Nm f _c =52.7 Hz n=1.8 err=0.10	_	••••		M ₀ =1.4e+10 Nm f _c =39.7 Hz n=1.5 err=0.10		M_0 =1.5e+11 Nm f_c =27.2 Hz n =1.5 eH=1.16	M ₀ =5.1e+10 Nm f _c =33.5 Hz n=1.7 Tr=0.11
10 ¹² -	2018159011231IMS0c M ₀ =2.9e+10 Nm f _c =38.6 Hz	000(20	018159035257IMS00) - -	2018159044000IMS00	0000	M ₀ =3.0e+10 Nm f _c =27.6 Hz	000	M ₀ =1.8e+10 Nm f _c =38.9 Hz	0000	2018160051518IMS0000 M ₀ =3.6e+10 Nm f _c =38.3 Hz) - -	2018160054115IMS00	2018160102510IMS000000 M ₀ =2.8e+11 Nm
10 ¹⁰ -	n=1.5 err=0.10	-	0181601810431MS0	-	2018160211026IMS(-	n=1.4 err=0.12	-	n=1.3 err=0.11	_	n=1.4 err=0.13	200	2018162012825IMS/07000	=1.9 err=0.13
10 ¹² -	2018160135358IMS00	-	018160181943IMS00	Pooc -	$M_0=1.8e+10 \text{ Nm}$ $f_c=50.3 \text{ Hz}$ $n=1.7$	-	2018161004449IMS00	0000	M ₀ =6.1e+10 Nm f _c =28.5 Hz n=1.4		M ₀ =2.2e+10 Nm f _c =36.3 Hz n=1.4)ºº[_	M ₀ =6.3e+10 Nm f _c =27.8 Hz n=1.4	M ₀ =2.5e+10 Nm f _c =38.0 Hz n=1.6
10 ¹⁰ -	2018162102701IMS00	000(20	018162103517IMS00	2000	err=0.07	0000	(2018162134139IMS(000	ārr≡0.12	0000	err=0.10	000	2018163001121IMS00000	err=0.10
10 ¹² -		-	M ₀ =1.7e+10 Nm f _c =32.8 Hz n=1.6 err=0.08	-	M ₀ =1.2e+11 Nm f _c =27.0 Hz π=1.6 e0=0.08	_	M ₀ =1.1e+11 Nm f _c =19.4 Hz π=1.3 er=0.08	_		. [M ₀ =1.0e+10 Nm f _c =42.5 Hz n=1.7 err=0.13		M ₀ =6.1e+09 Nm f _c =41.3 Hz n=1.5 err=0.12	
10 ¹⁰ -	2018163115829IMS00	0000 20	018163132124IMS00	-0000	2018164031000IMS00	0000	2018165002042IMS00	000	2018165152357IMS0Q	-0000	2018165200500IMS0-00	000	2018166021841IMSC 0000	2018166111647IMS000000
10 ¹² -	M ₀ =6.0e+10 Nm f _c =33.0 Hz n=1.4 rr=0.13			-	M ₀ =1.6e+10 Nm f _c =31.9 Hz n=1.7 err=0.10	_	M ₀ =1.1e+10 Nm f _c =51.3 Hz n=1.6 err=0.10	_	••••				M ₀ =9.5e+09 Nm f _c =36.1 Hz n=1.4 err=0.11	M_0 =4.6e+10 Nm f_c =29.8 Hz n =1.6
10 ¹² -	2018168094946IMS00 	000(20	018168112428IMSC M ₀ =2.2e+10 Nm	 - -	2018169024000IMS00	0000	2018169033430IMS00	000	2018169042045IMS000 M ₀ =2.8e+10 Nm	0000	2018169213726IMSC 00] _ 	2018169230658IMS000000000000000000000000000000000000	2018170012100IMS000000 M ₀ =1.4e+10 Nm
10 ¹⁰ -	f _c =34.6 Hz n=1.3 err=0.12		f _c =18.3 Hz n=1.4 err=0.15	_		-		-	f _c =45.2 Hz n=1.7 err=0.10	_	f _c =32.6 Hz n=1.7 err=0.10	-	f _c =39.6 Hz n=1.8 err=0.11	f _c =22.9 Hz n=1.3 err=0.16
10 ¹² -	2018170013500IMS00 M ₀ =2.8e+11 Nm M ₀ =2.8e+11 Nm M ₀ =31.5-Hz ==1.7	-	M ₀ =2.7e+10 Nm f _c =30.2 Hz n=1.7) - -	M ₀ =3.6e+10 Nm f _c =27.6 Hz n=1.6	0000	2018170141444IMS00	0000	2018170145100IMS0Q	0000	M ₀ =2.5e+10 Nm f _c =40.8 Hz n=1.8] - -	2018170200105IMS00	2018170210141IMS0 <mark>4</mark> 0000
10 ¹⁰ -	err=1.14 2018171001230IMS00	0000 20	err=0.11 018171003700IMS00	-	err=0.08 -	0000	2018171034700IMS	000	2018171100309IMS0Q	-0000	err=0.07	000	2018171101020IMS00000	2018171113245IMS000000
10 ¹² -		-	M ₀ =3.8e+10 Nm f _c =34.3 Hz n=1.5		M ₀ =1.3e+11 Nm f _c =28.7 Hz n=1.7 el-0.11	-		-	M ₀ =1.1e+10 Nm f _c =37.3 Hz n=1.5 err=0.12		M ₀ =3.4e+10 Nm f _c =33.0 Hz n=1.9 err=0.12		M ₀ =1.1e+10 Nm f _c =37.2 Hz n=1.6 err=0.10	
10 ¹⁰ -	2018171120032IMS00	000(20	018171170704IMS00	0000	2018171173814IMS00	0000	2018171232614IMS00	000	2018171233929IMS00	0000	2018172001100IM50000	000	2018172010600IMS00000	2018172041700IM 200000
10 ¹² -	M ₀ =1.2e+10 Nm f _c =50.9 Hz n=1.8 err=0.13	-	M ₀ =2.9e+10 Nm f _c =49.4 Hz n=1.8 err=0.11	-	M ₀ =2.1e+11 Nm f.=34.4 Hz n=1.9 err=1.15	-	M ₀ =4.6e+10 Nm f _c =29.8 Hz n=1.6 cr=0:11	-	M ₀ =3.6e+10 Nm f _c =32.9 Hz n=1.5 err=0.11		M ₀ =2.1e+10 Nm f _c =39.8 Hz n=1.6 err=0.09	-{ 	M ₀ =6.7e+09 Nm f _c =55.2 Hz n=1.7 err=0.06	$M_0=1.1e+11 \text{ Nm}$ $f_c=24.6 \text{ Hz}$ $m=1.8$ $m=0.05$
10 ¹² -	M ₀ =3.5e+10 Nm	000(20	M ₀ =2.4e+10 Nm	 - -	M ₀ =4.3e+10 Nm	0000	2018172180735IMS00	000:	M ₀ =6.9e+10 Nm	0000	M ₀ =1.3e+11 Nm] - -	2018172234909IMS0000	2018173042858IMS000000 M ₀ =1.4e+10 Nm
10 ¹⁰ -	f _c =40.0 Hz n=1.9 err=0.05	0000 30	f _c =42.3 Hz n=1.9 err=0.07	_	f _c =37.6 Hz n=1.5 	-	2010172142204105	-	f _c =35.4 Hz n=1.8 =0.11	_	f _c =33.4 Hz = π=2.0 el. 0.11	_	20101731013501MC/0000	f _c =44.5 Hz n=1.8 err=0.09
10 ¹² -	M ₀ =4.3e+10 Nm f _c =34.7 Hz n=1.8	-	M ₀ =2.1e+10 Nm f _c =40.4 Hz n=1.7	Pooc	M ₀ =3.8e+10 Nm f _c =32.9 Hz n=1.9	-	M ₀ =7.7e+10 Nm f _c =37.3 Hz n=1.8	0000	M ₀ =2.4e+10 Nm f _c =46.8 Hz n=1.6	-	$M_0=1.2e+11 \text{ Nm}$ $f_c=38.2 \text{ Hz}$	-P ^{oo} (_	2018173191258IMS00000	M ₀ =1.1e+10 Nm f _c =48.5 Hz n=1.7
10 ¹⁰ -	2018173220003IMS00	0000 20	err=0.07	2000	2018174043300IMS00	0000	2018174062000IMS00	000	err=0.06	-0000	en 0.10 2018174085934IMS0000	000	2018174131934IMS00000	err=0.05
10 ¹²	M ₀ =7.1e+10 Nm f _c =31.7 Hz n=1.9 =0.08	-				-	M ₀ =4.4e+10 Nm f _c =28.0 Hz n=1.7 err=0.08	-			M ₀ =2.7e+10 Nm f _c =43.2 Hz n=1.7 err=0.07	-	M ₀ =1.8e+10 Nm f _c =41.8 Hz n=1.4 err=0.08	M_0 =1.8e+10 Nm f_c =39.7 Hz n =1.8 err =0.05
ctrum 6M (Nm) 10 ¹² -	2018175062422IMS00	000(20	018175071713IMSC	0000	2018175132759IMS00	0000	2018176001813IMS00	000	2018176155852IMSO	0000	2018176170554IMS0Q00	000	2018176210520IMS00000	2018177104730IMS000000
spe	•	-	M_0 =8.1e+10 Nm f_c =39.6 Hz n=1.9 f_c =0.15	-	M ₀ =5.1e+10 Nm f _c =26.3 Hz n=1.4 Pr=0.07	_	M ₀ =1.7e+11 Nm f _c =35.9 Hz n=1.9 err=0.13	-	M ₀ =4.7e+10 Nm f _c =27.9 Hz n=1.6 FTT=0.09	-	7,001.9 Hz 1,001.9 Hz 1,-1.8 err=0.19	-	M ₀ =3.2e+11 Nm 6=26.8 Hz 0=1.9 err=0.06	M ₀ =1.9e+10 Nm f _c =34.9 Hz n=2.0 err=0.08
e displacement 10 ¹⁰ -	2018178152609IMS00	000(20	018178222942IMS00 M ₀ =5.1e+10 Nm f_c =32.1 Hz	 - -	2018179053245IMS00 M ₀ =3.7e+10 Nm f _c =37.0 Hz	0000	M ₀ =8.4e+10 Nm f _c =35.6 Hz	000	M ₀ =1.1e+11 Nm f _c =28.7 Hz	0000	2018180040100IMS0000 M ₀ =4.6e+10 Nm f _c =31.4 Hz] - -	2018180094138IMS00 M ₀ =4.7e+10 Nm f _c =36.2 Hz	2018181040940IMS0 0000 M ₀ =3.2e+10 Nm f _c =28.2 Hz
3000 Source	2018181065239IMS00	0000 30	n=1.7 π=0.07	2000	n=1.6 .orr=0.10 _	-	n=1.8 =0.15	-	- π=1.6- co=0.10	_	n=1.7	_	n=1.6 	n=1.5 err=0.05
10 ¹² -	M ₀ =7.3e+10 Nm f _c =30.9 Hz n=1.9	-	M ₀ =1.7e+10 Nm f _c =24.8 Hz n=1.1	-	M ₀ =8.5e+10 Nm f _c =35.0 Hz	-	M ₀ =1.6e+11 Nm f _c =29.2 Hz n=1.9	 - 	M ₀ =6.0e+10 Nm f _c =37.0 Hz n=1.9		$M_0=7.2e+10 \text{ Nm}$ $f_c=37.0 \text{ Hz}$ $m=2.0$ $m=0.09$	~` <u>\</u> -[M ₀ =4.1e+10 Nm f _c =40.2 Hz n=1.8	M ₀ =2.8e+10 Nm f _c =42.0 Hz n=1.9
10 ¹⁰ -	2018183215029IMS00	0000 20	err=0.06 018184003003IMS00	-	2018184201046IMS00	0000	eM 0.09	000	2018185001326IMS00	-0000	2018185014623IMS0Q00	000	2018185034551IMS00000	err=0.07
10 ¹² -	M_0 =2.6e+10 Nm f_c =42.3 Hz n =1.9 err =0.07		M ₀ =1.7e+10 Nm f _c =43.0 Hz n=1.8 err=0.05		M ₀ =3.1e+11 Nm 1.=30.4+tz n=2.1 err=0.11	-		_	M ₀ =2.6e+10 Nm f _c =44.2 Hz n=1.9 err=0.07		M ₀ =4.4e+10 Nm f _c =37.8 Hz n=1.8 rr=0.10		M ₀ =9.6e+09 Nm f _c =51.3 Hz n=2.0 err=0.06	M ₀ =1.5e+10 Nm f _c =36.1 Hz n=1.7 err=0.06
10 ¹² -	2018185145450IMS00	000(20	018185155423IMS000) - -	2018186070100IMS00	0000	2018186092109IMS00	000:	2018186115357IMS000	0000	2018186131522IMS0000 M ₀ =2.7e+11 Nm) - - -	2018186202646IMS000000000000000000000000000000000000	2018186215007IMS000000 M ₀ =2.3e+10 Nm
10 ¹⁰ -	f _c =41.0 Hz n=1.8 err=0.04	-	f _c =47.4 Hz n=1.8 err=0.06	_	=27.6 Hz n=2.0 err=0.09	_	f _c =33.9 Hz n=1.9 n=0.07	_	••••	_	err=0.11	-	f _c =37.7 Hz - n=1.9 - n=0.06	f _c =45.9 Hz n=1.8 err=0.07
10 ¹² -	$M_0=2.4e+10 \text{ Nm}$ $f_c=37.8 \text{ Hz}$	000(20	M ₀ =4.6e+10 Nm f _c =36.0 Hz) - -	M ₀ =2.8e+10 Nm f _c =39.5 Hz	0000	M ₀ =1.9e+10 Nm f _c =43.6 Hz	000	M ₀ =1.8e+10 Nm f _c =40.1 Hz	0000	M ₀ =1.4e+10 Nm f _c =43.0 Hz	} }	M ₀ =9.5e+09 Nm f _c =49.1 Hz	2018188193122IMS000000 M ₀ =3.2e+10 Nm f _c =42.3 Hz
10 ¹⁰ -	n=1.7 err=0.07	0000 20	n=2.0 τ= 0.08 -	-	n=2.2 err=0.07	0000	n=1.6 err=0.07	000	n=1.6 err=0.07	-0000	n=1.8 err=0.06	000	n=1.8 err=0.09	n=2.0 err=0.06
10 ¹² -	M ₀ =3.4e+10 Nm f _c =39.5 Hz n=1.9 err=0.06	-	M ₀ =2.7e+10 Nm f _c =39.2 Hz n=1.8 err=0.07	- - - -	M ₀ =1.8e+10 Nm f _c =44.0 Hz n=2.0 err=0.05	-	M ₀ =4.6e+10 Nm f _c =39.1 Hz n=2.0	-	M ₀ =1.8e+10 Nm f _c =48.7 Hz n=1.9 err=0.05		$M_0 = 0.0 + 12 \text{ Nm}$ $f_c = 0.3 \text{ Hz}$ $m = 2.1$ $err = 0.10$	-	M ₀ =8.3e+09 Nm f _c =45.7 Hz n=1.7 err=0.07	M ₀ =1.6e+10 Nm f _c =43.0 Hz n=1.8 err=0.09
10 ¹⁰ -	2018189132728IMS00	0000 20	018189142028IMS00	- 0000	2018189152317IMS00	0000	2018189160854IMS00	000	2018189163251IMS000	-0000	2018189173537IMS0000	000	2018189195043IMS04000	2018190005253IMS000000
10 ¹² - 10 ¹⁰ -	M_0 =9.7e+10 Nm f_c =41.5 Hz $\frac{n}{2}$ =1.9 en c0.10	-	M ₀ =7.1e+09 Nm f _c =44.2 Hz n=1.8 err=0.04	-	M ₀ =2.7e+10 Nm f _c =47.9 Hz n=2.1 err=0.07	-	M ₀ =3.5e+11 Nm =26.4 Hz ==1.9 err=0.13	-	000		•••	-	M ₀ =2.6e+11 Nm £=26.8-Hz - 0n=2.0 err 0.13	M ₀ =3.4e+10 Nm f _c =32.5 Hz n=1.6 err=0.10
10 ¹² -	2018190020811IMS00 M ₀ =1.1e+10 Nm	0000 20	M ₀ =8.4e+10 Nm)000c	2018190155046IMS00 M ₀ =9.3e+09 Nm	0000	M ₀ =1.5e+10 Nm	000	M ₀ =3.2e+10 Nm	0000	M ₀ =3.8e+10 Nm) - -	2018194133411IMS00000	M ₀ =2.6e+10 Nm
10 ¹⁰ -	f _c =43.7 Hz n=1.6 err=0.08	0000	f _c =18.3 Hz) 	f _c =50.1 Hz n=1.6 err=0.07	001	f _c =43.1 Hz n=1.9 err=0.09	-	f _c =29.5 Hz n=1.6 err=0.08_	-	f _c =35.5 Hz n=1.9 err=0.10)nr	20181960710001100	f _c =45.4 Hz n=1.8 err=0.09
10 ¹² -	M ₀ =1.6e+10 Nm f _c =48.3 Hz n=1.6		M ₀ =2.9e+10 Nm f _c =39.2 Hz n=1.7) - - -	2018195172331IMS00	_		- 	f _c =07.5 Hz	_000	M ₀ =6.7e+10 Nm f _c =37.1 Hz	~_ -[M ₀ =1.5e+10 Nm f _c =49.5 Hz n=1.8	M ₀ =3.3e+11 Nm =23.5 Hz n=1.9
10 ¹⁰ -	err=0.06 2018196200450IMS00	0000 20	err=0.09 018197015541IMS00	- 0000	2018197070436IMS00	0000	2018197091659IMS00	000	err=0.	-0000	2018197183626IMS0Q00	00(_	err=0.08	err 111 2018199104200IMS000000
10 ¹² -	$M_0=7.8e+10 \text{ Nm}$ $f_c=29.6 \text{ Hz}$ $g_c=29.6 \text{ Hz}$ $g_c=0.11$		•	-		-		-	M ₀ =2.5e+11 Nm f. =21.5 Hz n=1.7 ehr 0.13		M ₀ =1.4e+10 Nm f _c =43.2 Hz n=1.6 err=0.09			$M_0=8.6e+10 \text{ Nm}$ $f_c=33.4 \text{ Hz}$ $p=1.8$ $p=0.09$
	2018199170820IMS00	000(20	018199170914IMS00	0000		0000		000	L	0000	2018200015608IMS0000) 	2018200040208IMS00000	<u> </u>
10 ¹² -	$M_0=8.8e+10 \text{ Nm} $ $f_c=25.2 \text{ Hz} $ $r=0.10$	-		-	M ₀ =4.6e+10 Nm f _c =37.7 Hz n=1.8 Tr=0.12	-	M ₀ =2.3e+11 Nm f.=2 <u>9</u> 0.Hz n=1.7 err=0.11	-	M ₀ =3.4e+11 Nm -3 T.9 H2 	-	••••	1	M ₀ =5.3e+10 Nm f _c =25.2 Hz n=1.6 serr=0.09 =	M_0 =1.3e+10 Nm f_c =53.3 Hz n =1.8 err =0.07
10 ¹² -	M ₀ =1.0e+10 Nm	000(20	M ₀ =2.7e+10 Nm) - -	2018200102006IMS00	0000	M ₀ =1.2e+10 Nm	000	M ₀ =2.2e+10 Nm	0000	M ₀ =8.8e+10 Nm] - -	M ₀ =1.1e+10 Nm	2018200143037IMS000000 M ₀ =1.1e+10 Nm f.=45 9 Hz
10 ¹⁰ -	f _c =47.2 Hz n=2.0 err=0.08	0000	f _c =41.5 Hz n=1.7 err=0.11	200	2018201073346IMS00	-	f _c =37.7 Hz n=1.8 err=0.10	-	f _c =31.5 Hz n=1.6 err=0.09	- 000	f _c =34.5 Hz - n=1.5 - 0.11 2018202134535IMS0000)nr	f _c =40.5 Hz n=1.6 err=0.07	f _c =45.9 Hz n=1.7 err=0.09
10 ¹² -	M ₀ =7.0e+09 Nm f _c =47.5 Hz n=1.6		M ₀ =1.3e+10 Nm f _c =40.7 Hz n=1.4	. JUQ		- 	M ₀ =1.2e+10 Nm f _c =40.7 Hz n=1.5	- 	M ₀ =2.7e+10 Nm f _c =36.1 Hz n=1.5		M ₀ =1.0e+10 Nm f _c =48.8 Hz n=1.8	-	M ₀ =1.4e+10 Nm f _c =46.4 Hz n=1.6	$M_0=7.5e+10 \text{ Nm}$ $f_c=32.8 \text{ Hz}$
10 ¹⁰ -	err=0.08	0000 20	err=0.07	-	2018203030928IMS00	0000	err=0.08	000	err=0.09	-	err=0.07	000	err=0.09	
10 ¹² -	M ₀ =9.5e+09 Nm f _c =47.8 Hz n=1.7 err=0.09		$M_0=7.0e+10 \text{ Nm}$ $f_c=37.3 \text{ Hz}$ $n=1.8$ $=0.13$	-	M ₀ =2.6e+10 Nm f _c =35.1 Hz n=1.5 err=0.10	-	M ₀ =1.0e+10 Nm f _c =50.8 Hz n=1.9 err=0.07	_	M ₀ =2.0e+11 Nm f _c =31.3 Hz n=1.8 err=013	_	$M_0=1.1e+11 \text{ Nm}$ $f_c=31.4 \text{ Hz}$ $-\pi=1.8$ $eb=0.12$	- - -	M ₀ =1.1e+10 Nm f _c =39.8 Hz n=1.5 err=0.09	10 100 - 35 - 28 succession - 21 its - 14 ts - 7
10 ¹⁰ -	2018203174444IMS00	000(20	018203230921IMS00 10 100	- 0000	2018203232316IMS00 10 100	0000	2018204160756IMS00	000	2018204220258IMS000	- 0000	2018204234743IMS0000 10 100	00(_	2018205205035IMS000000 10 100	. ,
	100		TUU		10U		frequency (Hz)		-0 IOO		100		_0 100	