SPINTE AMMISSIBILI DELLE TUBAZIONI — *PERMISSIBLE PIPE ACTIONS*

Connessione *Connection*	(1) δx (mm)	δy (mm)	δz (mm)		± F_x (kN)	± F_y (kN)	± F_z (kN)	± M_x (kNm)	± M_y (kNm)	± M_z (kNm)
MAA11/01 Main steam inlet left	-22.1	+9.4	-3.6	c	65	65	65	200	200	200
				h	33	33	33	100	100	100
MAA12/01 Main steam inlet right	-22.1	-9.4	-3.6	c	65	65	65	200	200	200
				h	33	33	33	100	100	100
MAA10/05 Extraction HP8	-20.0	0.0	-3.8	c	2.5	2.5	2.5	7.	7.	7.
				h	1.2	1.2	1.2	3.5	3.5	3.5
MAA10/11 HP exhaust steam left	-21.6	+2.0	-3.9	c	46	46	46	140	140	140
				h	23	23	23	70	70	70
MAA10/12 HP exhaust steam right	-21.6	-2.0	-3.9	c	46	46	46	140	140	140
				h	23	23	23	70	70	70

(1) Dilatazioni termiche in cond. Nominali — *Thermal expansions in normal operations*

c = freddo *cold*
h = caldo *hot*

c		ΣF_y	$\leq \pm 180$	(kN)	
h		ΣF_y	$\leq \pm 60$	(kN)	
c			ΣF_z	$\leq \pm 180$	(kN)
h			ΣF_z	$\leq \pm 60$	(kN)
c		$\Sigma (z*F_y) + \Sigma (y*F_z) + \Sigma M_x$		$\leq \pm 750$	(kNm)
h		$\Sigma (z*F_y) + \Sigma (y*F_z) + \Sigma M_x$		$\leq \pm 250$	(kNm)

(2) Coordinate bocchelli in accordo al Mech.O/L — *Nozzles coordinates according to mech. O/L*

SPINTE ATTUALI DELLE TUBAZIONI — *ACTUAL PIPE ACTIONS*

Connessione x *Connection*	(2) y (mm)	(mm)	z	x (kN)	F F_y (kN)	F_z (kN)	M_x (kNm)	M_y (kNm)	M_z (kNm)
MAA11/01 Main steam inlet left	-10575	+1990	-220	c					
				h					
MAA12/01 Main steam inlet right	-10575	-1990	-220	c					
				h					
MAA10/05 Extraction E7	-11135	0.0	-1145	c					
				h					
MAA10/11 HP exhaust steam left	-11585	+600	-1200	c					
				h					
MAA10/12 HP exhaust steam right	-11585	-600	-1200	c					
				h					
				c					
				h					

Sezione di turbina : *Turbine section :* HD3RL8

Valvola :: *Valve :* 2 x FV2 200 112

c		ΣF_y	=	(kN)	
h		ΣF_y	=	(kN)	
c			ΣF_z	=	(kN)
h			ΣF_z	=	(kN)
c		$\Sigma (z*F_y) + \Sigma (y*F_z) + \Sigma M_x$		=	(kNm)
h		$\Sigma (z*F_y) + \Sigma (y*F_z) + \Sigma M_x$		=	(kNm)

SPINTE AMMISSIBILI DELLE TUBAZIONI — *PERMISSIBLE PIPE ACTIONS*

Connessione *Connection*	(1) δx (mm)	δy (mm)	δz (mm)		± F_x (kN)	± F_y (kN)	± F_z (kN)	± M_x (kNm)	± M_y (kNm)	± M_z (kNm)
MAB11/01 Hot reheat inlet left	-3.9	+16.3	-3.8	c	40	40	40	120	120	120
				h	20	20	20	60	60	60
MAB12/01 Hot reheat inlet right	-3.9	-16.3	-9.1	c	40	40	40	120	120	120
				h	20	20	20	60	60	60
MAB10/15 Extraction LP4	-6.0	-1.5	-4.5	c	10	10	10	30	30	30
				h	5	5	5	15	15	15
MAB10/17 Extract. (to deaerator)	-6.0	+1.5	-4.8	c	10	10	10	30	30	30
				h	5	5	5	15	15	15
MAB10/18 Extraction HP6	-6.6	0.0	-4.8	c	4	4	4	12	12	12
				h	2	2	2	6	6	6

(1) Dilatazioni termiche in cond. nominali	*Thermal expansions in normal operations*			c		ΣF_y	≤ ± 300 (kN)			
				h		ΣF_y	≤ ± 100 (kN)			
c = freddo *cold*				c			ΣF_z	≤ ± 300 (kN)		
h = caldo *hot*				h			ΣF_z	≤ ± 100 (kN)		
(2) Coordinate bocchelli in accordo al Mech.O/L	*Nozzles coordinates according to mech. O/L*			c		$\Sigma (z*F_y) + \Sigma (y*F_z) + \Sigma M_x$			≤ ±1200 (kNm)	
				h		$\Sigma (z*F_y) + \Sigma (y*F_z) + \Sigma M_x$			≤ ±400 (kNm)	

SPINTE ATTUALI DELLE TUBAZIONI — *ACTUAL PIPE ACTIONS*

Connessione x *Connection*	(2) y (mm)	(mm)	Z		x (kN)	F F_y (kN)	F_z (kN)	M_x (kNm)	M_y (kNm)	M_z (kNm)
MAB11/01 Hot reheat inlet left	-5805	+3210	-200	c						
				h						
MAB12/01 Hot reheat inlet right	-5805	-3210	-1800	c						
				h						
MAB10/15 Extraction LP4	-5285	-450	-1345	c						
				h						
MAB10/17 Extract. E4 (to deaerator)	-5285	+450	-1440	c						
				h						
MAB10/18 Extraction HP6	-5735	0.0	-1455	c						
				h						

Sezione di turbina : *Turbine section :* MD3L				c		ΣF_y	= (kN)			
				h		ΣF_y	= (kN)			
				c			ΣF_z	= (kN)		
Valvola :: *Valve :* 2xMKRA 355				h			ΣF_z	= (kN)		
				c		$\Sigma (z*F_y) + \Sigma (y*F_z) + \Sigma M_x$		= (kNm)		
				h		$\Sigma (z*F_y) + \Sigma (y*F_z) + \Sigma M_x$		= (kNm)		

SPINTE AMMISSIBILI DELLE TUBAZIONI — ***PERMISSIBLE PIPE ACTIONS***

	(1)									
Connessione ***Connection***	**δx** (mm)	**δy** (mm)	**δz** (mm)	(2)	**± F_x** (kN)	**± F_y** (kN)	**± F_z** (kN)	**± M_x** (kNm)	**± M_y** (kNm)	**± M_z** (kNm)
MAC 10/13	+6.3	-0.8	-1.8	c	40	40	40	120	120	120
Extraction 1 (Gen. end)				h	20	20	20	60	60	60
MAC 10/14	+1	-0.8	-1.8	c	40	40	40	120	120	120
Extraction 1 (Turb. end)				h	20	20	20	60	60	60
MAC 10/15	+6.3	+0.9	-2.5	c	22	22	22	66	66	66
Extraction 2 (Gen. end)				h	11	11	11	33	33	33
MAC 10/16	+1	+0.9	-2.5	c, h	22	22	22	66	66	66
Extraction 2 (Turb. end)					11	11	11	33	33	33
MAC 10/17	+3.8	+1.1	-5.9		22	22	22	66	66	66
Extraction 3					11	11	11	33	33	33
MAC10/11 (at T= 40°C)	+1.2	0.0	-1.2		±250	±250	+825	±1350	±1350	±650
LP exaust (at T=120°C)	+2.9	0.0	-2.9				-1600			

(1) Dilatazioni termiche in cond. nominali
Thermal expansions in normal operations

(2) c = freddo / *cold*
h = caldo / *hot*

(3) Coordinate bocchelli
Nozzles coordinates

c		Σ Fy	≤ ± 75 KN	
h		Σ Fy	≤ ± 37.5 KN	
c			Σ Fz	≤ ± 90 KN
h			Σ Fz	≤ ± 45 KN
c		Σ (z·Fy) +Σ (y·Fz) +Σ Mx		≤ ± 226 kNm
h		Σ (z·Fy) +Σ (y·Fz) +Σ Mx		≤ ± 113 kNm

SPINTE EFFETTIVE DELLE TUBAZIONI — ***ACTUAL PIPE ACTIONS***

	(1)									
Connessione x ***Connection***	(mm)	**y** (mm)	**Z** (mm)	(2)	**± F_x** (kN)	**± F_y** (kN)	**± F_z** (kN)	**± M_x** (kNm)	**± M_y** (kNm)	**± M_z** (kNm)
MAC 10/13	+950	-1150	-2620	c						
Extraction 1 (Gen. end)				h						
MAC 10/14	-950	-1150	-2620	c						
Extraction 1(Turb. end)				h						
MAC 10/15	+950	+950	-2620	c						
Extraction 2 (Gen. end)				h						
MAC 10/16	-950	+950	-2620	c						
Extraction 2(Turb. end)				h						
MAC 10/17	0.0	+500	-2620	c						
Extraction 3				h						
MAC10/11	0.0	0.0	-2650	c						
LP exaust				h						

Sezione di turbina : BP
Turbine section : BP
ND33
Valvole / Valves

c		Σ Fy	= kN	
h		Σ Fy	= kN	
c			Σ Fz	= kN
h			Σ Fz	= kN
c		Σ (z·Fy) +Σ (y·Fz) +Σ Mx		= kNm
h		Σ (z·Fy) +Σ (y·Fz) +Σ Mx		= kNm