



Company:			
Address:			
Phone:			
Name:		Department:	
E-mail:		Date:	

1. Important Project Information:

Project title:			
Ship Type: (Marine, Civil, etc.)			
Classification Society and Class:			
Task / function of SBT system: (application's braking concept / task and function of brake/ safety aspects / impacts / amount of energy dissipation etc.)			
Scope of supply:	☐ Braking system ☐ Blocking device ☐ Turning device ☐ Brake disc / toothed disc ☐ Control cabinet ☐ HPU ☐ Spare parts, accessories ☐ Other...		
Starboard and portside?	☐ Starboard ☐ Portside ☐ No mirrored version needed		
Rated drive power of shaft line:	P		kW
Nominal rotational speed of shaft line:	n_n		min ⁻¹
Nominal torque of shaft line:	M_n		kNm
Total moment of inertia at the disc: (complete drivetrain → air + water)	J		kg·m ²

2. Brake System – Type

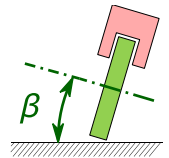
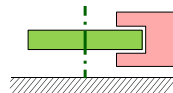
Mode of actuation:	☐ Active	☐ Active self-opening in emergency
	☐ Active self-locking	☐ Still unclear
Preferred Design:	☐ Electromechanical EMB-STOP	☐ Hydraulic KTR-STOP®
	☐ Proposed by KTR	

**3. Technical requirements – Loads**

Braking torque, static required:	$M_{b,stat}$	_____	kNm
Safety factor therein included?	☐ Yes	☐ No	☐ Needed: _____
Braking torque, dynamic required:	$M_{b,dyn}$	_____	kNm
Safety factor therein included?	☐ Yes	☐ No	☐ Needed: _____
Max. speed of the brake disc: (when the brake is to be applied)	n_{max}	_____	min ⁻¹
Driving- or load torque: (present at braking process / approach flow)	M_{Ld}	_____	kNm ☐ Not present
Max. turning torque (max. breakaway): (short time, from 0rpm to rated speed)	M_{Td}	_____	kNm
Safety factor therein included?	☐ Yes	☐ No	☐ Needed: _____
Turning torque, continuously required:	M_{Tc}	_____	kNm
Safety factor therein included?	☐ Yes	☐ No	☐ Needed: _____
Turning speed, required:	n_T	_____	min ⁻¹
Locking torque max. required:	M_{Lock}	_____	kNm
Safety factor therein included?	☐ Yes	☐ No	☐ Needed: _____

4. Geometry / Installation Space

Number of brakes per disc:	z	_____
Brake disc / toothed disc Ø min.:	D_{Amin}	_____ mm
Brake disc / toothed disc Ø max.:	D_{Amax}	_____ mm
Brake disc / toothed disc thickness:	B	_____ mm
Outer-Ø of disc flange / clutch / hub:	D_c	_____ mm
Air gap between disc and brake pads: ...(consider axial movement of shaft line)	S_{dp}	_____ mm
Disc to be splitted into halves?	☐ Yes	☐ No
Material of brake disc (if specified):	_____	
Installation position of the brake disc:	☐ Vertical axis (Azipod)	☐ Horizontal axis β _____



**5. Braking Time and Periods (if special requirements needed):**

Reaction time, required:

(period until 100% clamping force F_c reached) t_0 _____ sec

Braking time, net

(period, while dissipating brake energy)

 t_b _____ sec

Braking time, total

(= $t_0 + t_b$) $t_{b,tot}$ _____ sec

Releasing time, net

(period from release command to 0% clamping force F_c) $t_{L,0}$ _____ sec

Releasing time, total

(period from release command to fully released)

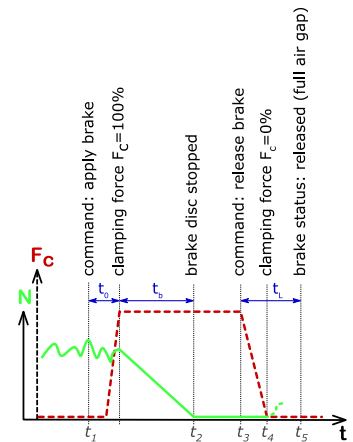
 t_L _____ sec

Number of actuations per annum:

 $a_{p,a}$ _____ Cycles p.a.

Max. frequency:

(actuations per time unit)

 $a_{p,h}$ _____ Cycles / hour**6. Environmental Conditions & Colour:**

Ambient temp. in operation, max.:

 T_{max} _____ °C

Ambient temp. in operation, min.:

 T_{min} _____ °C

Humidity, max.

 f_{max} _____ %Colour electromechanical system
hydraulic system☐ Standard RAL 7035☐ Other: _____☐ Standard RAL 5005☐ Other: _____Corrosivity category / durability range
(according ISO 12944-2 and ISO 12944-1)☐ Standard C4-H☐ Other: _____

Additional information:

7. Electrical Interface / Connection / Signals

Power supply

(electromechanical System /
hydraulic power unit - HPU)☐ Standard 400VAC / 50Hz☐ Special voltage: U_{DC} _____ V
 U_{AC} _____ V _____ Hz

Backup for power supply?

☐ Yes☐ No

Control voltage:

☐ Standard 24VDC

Output signals braking system

☐ Released☐ Wear☐ Applied

Control Box for EMB-STOP

(available for standard power supply)

☐ Yes☐ No

Output signals turning system:

☐ Pinion engaged☐ Pinion disengaged

Redundant signals required?

☐ Yes☐ No

Output signals locking system:

☐ Lock pin engaged☐ Lock pin disengaged

Redundant signals required?

☐ Yes☐ No

**8. Hydraulic power unit – HPU**

Hydraulic power unit to be delivered: _____

Prescribed hydraulic oils: _____

Functions: _____

(e.g. diaphragm accumulator, hand pump, etc.) _____

Required feedback of HPU: _____

(e.g. pressure switch, pressure sensor, etc.) _____

9. Intelligent module for controlled braking processes – IntelliRamp®IntelliRamp® required? ☐ Yes ☐ NoIncl. backup required? ☐ Yes ☐ NoControlled variable IntelliRamp®: ☐ Constant speed ☐ Constant deceleration☐ Constant time ☐ Other: _____

Electrical interface: _____

(digital inputs / outputs / signals / bus-system) _____

10. Documentation and QM-requirements☐ Material quality certificate: _____☐ Initial sample test report: _____☐ Factory acceptance test: _____☐ ATEX: ☐ Yes ☐ No _____☐ Others (e.g. ILS, etc.): _____**11. Miscellaneous**

Special features of the application known: _____

Special customer requests: _____

Competitive products known: _____

Installation space requested/available: _____

(preferable 3D-CAD model) _____

Special standards to meet: _____

Further information: _____

**12. Sketches / photos of the application**