

BENTEC ANTI COLLISION SYSTEM (ACS)

For a safe and collision-free operation of the traveling block

The Bentec Anti Collision System (ACS) protects the derrick equipment against collisions and damages when operating the traveling block. A micro-computerized safety surveillance system is continuously monitoring all movements of the traveling block in the derrick. Safety is achieved by controlling the position of the traveling block with precisely predictable stops in any position within the safety zone. Thus high levels of protection can be provided preventing personnel injury and damage to drilling equipment. Any differences in calculations made by two independent control systems immediately initiate emergency braking in case of a system failure.

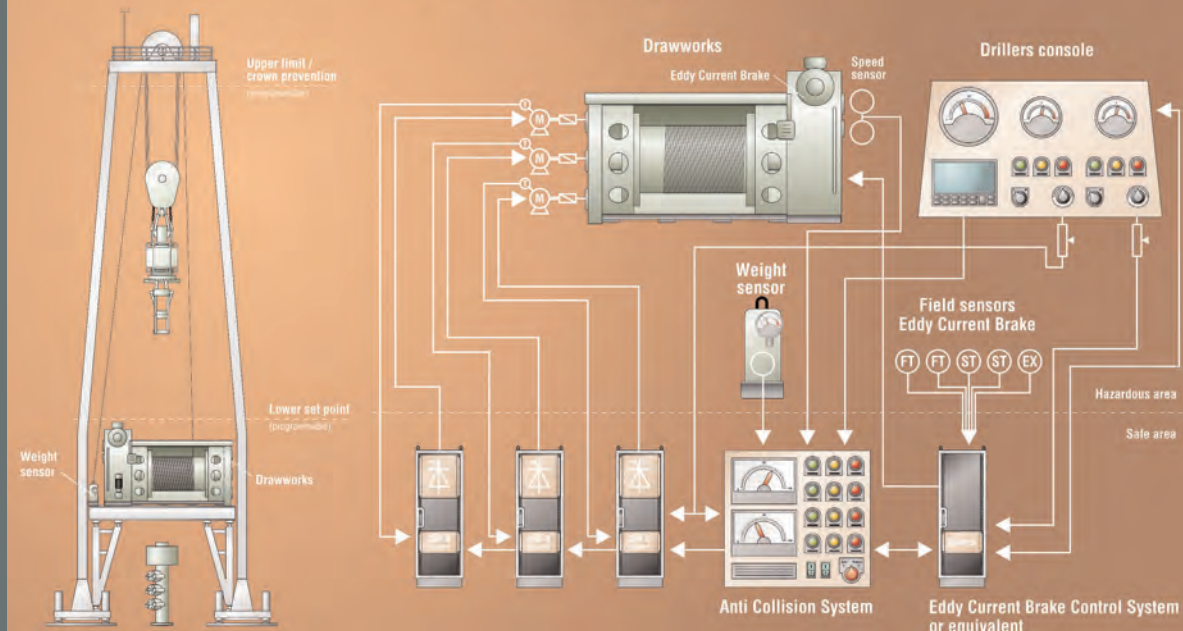
Movement within the operating area of the travelling block is prevented depending on the hook position, desired direction and the position of interlocked equipment. If it enters the minimum safety distance movements are automatically stopped. This safely prevents from any collisions with the crown block, rotary table and iron roughneck.

Additional equipment can be incorporated using the ACS supplement called Rig Control System (RCS). The ACS is continuously computing the hook speed and the hook load to determine the actual required minimum braking distance. This considerable increase in safety shortens round trips by around 10 %.

The system requires no additional control and operation. It automatically monitors the operation instructions preset by the driller and safely steers the hook to the selected position thus avoiding collisions depending on the actual drawworks. The system is self-adjusting via a menu-driven interface on the control panel. During the calibration procedure the driller is required to run the traveling block to the highest and lowest operational positions and to do a break test. The dynamic data includes the condition of the brakes and sheaves. For safety reasons the data is always recalibrated when maintenance work is carried out on the drawworks machinery.



Anti Collision System



- ▲ Travelling Block
- ▲ Redundant PLCs

▲ Blockdiagram

TECHNICAL DATA

Type of drawworks: Gear or chain driven
 Size of drawworks: 1000 HP to 6000 HP electrically driven
 Type of Drive System: AC or DC

Supply of Voltage: 110-230 V 50/60 Hz
 Typical Dimensions: (W x H x D mm)
 Central Unit: 800 x 2200 x 800
 Terminal: 288 x 144 x 43

Tailer-made solutions are available on request.

TRAINING

Training can be done either in our facilities in Bad Bentheim or at site on the unit.

SERVICE

Professional service like system test, customer acceptance, installation, commissioning, customer training and after sales is available. Our customer care service is on standby at any time via our service hotline

+49-5922-72-354 (during business hours) and
 +49-5922-72-111 (outside business hours).

ADVANTAGES :

- Safe and collision-free running of the hook in the derrick or mast
- Protection against personnel injury and damage to drilling equipment
- Auto-correlation based on the brake status and the hook load
- Auto-monitoring to enhance safety
- Free programmable working points
- Round trip time shortened by 10 %

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