

Breathing Air Monitoring System: BAMS

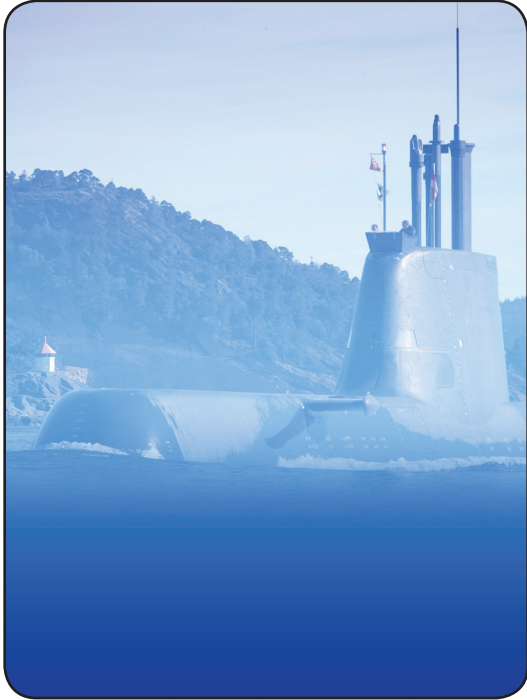


www.kocsavunma.com.tr





System solution for monitoring the breathing air ingredients of a submarine and warning the crew for the dangerous concentration levels of the gases



Breathing Air Monitoring System is an independent system which operates automatically under several submarine mission conditions (underwater navigation, surface navigation, harbour, snorkel, etc.).

Breathing Air Monitoring System is composed of two independent systems.

Analyzer System:

Analyzer System performs the ingredient analysis of the sucked air from the different rooms of the submarine. 2 pumps serve for the gas sucking from the submarine rooms. Measurements, gas levels, condition warnings are displayed on the display by using a PLC controlled software.

Sensor System:

Sensors of the system are distributed at the submarine locations. Sensor system, measures the gas ingredient levels at the selected rooms. Measurements, gas levels, condition warnings are displayed on the display by using a PLC controlled software.

System components are located in a rack cabinet. Display on the cabinet provides the display and monitoring feature for the system.

FUNCTIONAL FEATURES

- System monitors the following gas ingredients (hydrogen (H2), oxygen (O2), carbon dioxide (CO2), carbon oxide (CO), refrigerant agents (R134A/R404A), Chlorine (Cl2), hydrogen sulfide (H2S)) and provides warning for the concentration levels above threshold levels.
- System operates automatically.
- Sensor system provides continuous measurements.
- Analyzer system measures the gases in 18 different rooms of the submarine.
- Sensor system measures the gases in 10 different rooms of the submarine.
- Analyzer system can be calibrated automatically.
- Provides situation reports to the different systems of the submarine.
- System has been tested according to the environmental conditions defined for submarine platforms.

- MIL-STD-810F Temperature, Humidity, Temperature Shock
- MIL-S-901D Shock
- MIL-STD-461E EMC
- DOD-STD-1399 Magnetic

ANALYZER SYSTEM		OK	MEASURING CYCLE		LONG	TEST GAS O2		ALARM
SENSOR SYSTEM		OK	PRESSURE		1004 MPa	TEST GAS H2		NORMAL
COMPONENT UNIT	H2 VOL%	O2 VOL%	CO2 VOL%	CO VPM	REF VPM	SPARE		
BATT R1 AFT	H003 0.0	0	0	1	1			
CIC	H020 0	0	0.1	1	1			
DRIFT PAD	H018 0.0	20.7	0.1	1	1			
BATT R2 FWD	H029 0.0	20.7	0.1	1	1			
ENGINE ROOM	H006 0	0	0	1	1			
VENT SYSTEM	H011 0.0	20.7	0.1	1	1			
BATT R1 FWD	H006 0.0	20.7	0.1	1	1			
TOC	H013 0	0	0	0	0			
SNOORKEL TANK	H022 0.0	20.7	0	1	1			
BATT R2 AFT	H028 0.0	20.7	0.1	1	1			
OFF ACCOM	H025 0.0	20.7	0.1	1	0			
CPOB MESS	H027 0.0	20.7	0.1	1	1			
BATT R1 VENT	H001 0	20.7	0	1	1			
AUX MATCH R0	H024 0.0	20.7	0.1	1	1			
ELECTRONIC R	H023 0.0	20.7	0.1	1	1			
BATT R2 VENT	H020 0.0	20.7	0	1	1			
CHILLED W SET	H008 0.0	20.7	0.1	1	1			
AUX MATCH R1	H021 0.0	20.7	0.1	0	1			
SENSOR SYSTEM								
BATT R1	H002 0.0	VOL% H2	COC	H010 0	VOL% O2			
BATT R1 VENT	H008 0	VOL% H2	RADIO R	H048 0.7	VOL% CO2			
BATT R2	H009 0.2	VOL% H2	CIC	H014 0	VPM H2S			
BATT R2 VENT	H008 1.2	VOL% H2	ACCOM PASS WAY	H015 0	VPM H2S			
ENGINE ROOM	H007 0	VOL% H2	BATT R1	H016 0	VPM CL2			
TOC	H009 0	VOL% H2	CIC	H017 0	VPM CL2			
COC	H047 0	VOL% H2	BATT R2	H018 0	VPM CL2			
ACCOM PASS WAY	H048 0.7	VOL% H2	SPARE					

Üniversiteler Mah. İhsan
Doğramacı Bulvarı No:17/B 06800
ODTÜ Kampüsü-Ankara/TÜRKİYE

Tel +90(312) 218 89 00
Fax +90(312) 218 89 90

info@kocsavunma.com.tr

Ünalan Mah. Ayazma Cad.
Çamlıca İş Merkezi B3 Blok 34700
Üsküdar İstanbul/TÜRKİYE

Tel +90(216) 556 11 00
Fax +90(216) 556 11 88

www.kocsavunma.com.tr