SCIENCO/FAST®
a division of Bio-Microbics, Inc.

MarineFAST®

FAST® CONVERSION SEWAGE TREATMENT SYSTEMS

BioSolids Management System (BMS)

SAFE | ECONOMIC | RELIABLE | EFFICIENT | SIMPLE

Complete Sludge Management System

- Reduces sludge volume by 65% compared with other systems.
- No strainers, filters, membranes or centrifuges – clogging is virtually impossible.
- Proper operation does not depend upon the skill of the operator.
- Does not affect the dimensions, weights or operation of the FAST® unit.
- Vents to weather through the FAST unit – no separate vent piping required.

A simple and reliable method of dealing with accumulated sewage sludge on vessels and offshore platforms.

FAST® is the easy way to deal with sludge. A standard MarineFAST® unit meeting MEPC.159(55) or providing secondary treatment incorporates about one month of internal sludge storage. If you employ the next larger FAST unit, internal sludge storage will be increased to 3 months.

For longer periods, the MarineFAST BMS provides an aerobic sludge digester with long term internal storage. Operation is completely automatic and hands-free.

The sludge is completely enclosed in tanks and piping - no need for personnel to come into contact with sewage or sewage sludge!

The MarineFAST BMS Reference Data provides instructions and examples for selecting a system plus dimensions, weights and other data.

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Internationally recognized for quality products and top-notch field services, Scienco/FAST is a manufacturer of innovative, proven solutions for marine sewage devices, water treatment systems, biological tablets, and other industrial technologies.

To order or for more information on FAST® Sytems & products:

Toll-free (866) 652-4539 or **call (314) 756-9300**

w: www.sciencofast.com | e: solutions@sciencofast.com

PROCESS BASICS:

When settled, FAST sludge exhibits a concentration in water of about 4%. This compares with 1% to 3% that can be achieved by other systems.

At the same time, the more complex biota within the MarineFAST media tank includes higher ordered organisms that predate upon simpler life forms, effectively removing up to one-third of the mass and volume of the stored sludge. Conservatively speaking, properly settled sludge from the FAST process will produce about 3% / 4% X 66% = 50% of the volume of sludge to be expected from a suspended growth process.

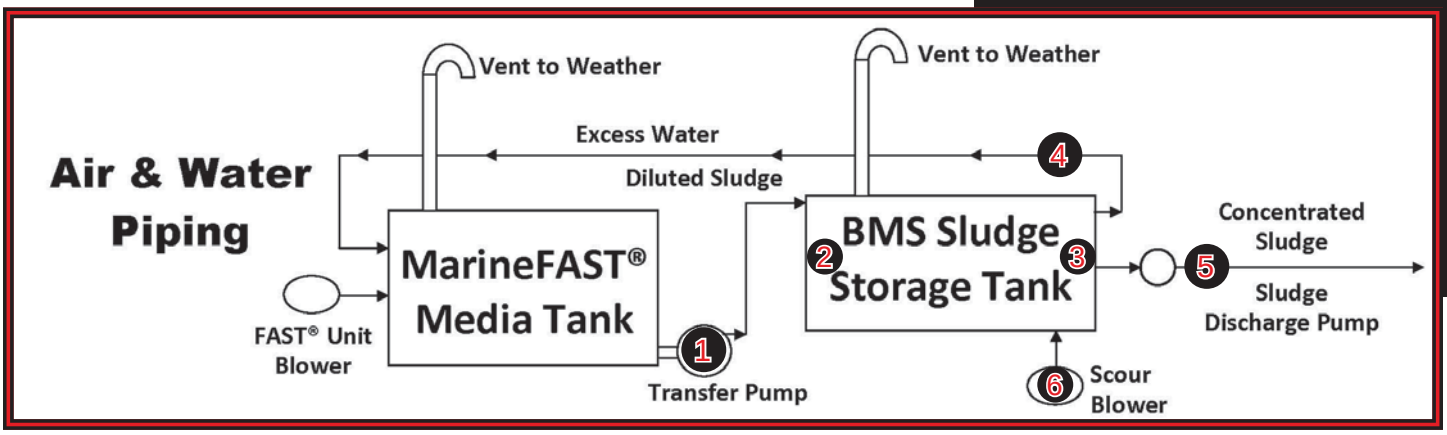
Also, the FAST sewage treatment system will continuously reprocess excess water returned from the BMS system and will discharge the treated effluent overboard to get the maximum possible reduction in mass and volume.

This digestion and dewatering provides another 30% reduction so that the amount of sludge produced by a FAST unit and MarineFAST BMS working together is about 50% X 70% = 35% that of a conventional system, a 65% reduction!

How It Works:

1 The transfer pump automatically moves the sludge-water mixture from the FAST media tank to the BMS.

2 The sludge is aerobically digested during storage. Because of the long detention time in the digester, the sludge is substantially reduced in mass and volume.



3 A rising liquid level in the digester shuts off the blower and allows sludge to settle to the bottom of the tank. This permits excess water to be pumped back to the FAST media tank for treatment and legal discharge to the sea.

4 Alternating aerobic and anoxic states within the digester stabilizes pH, maintaining a healthy culture for efficient digestion of the sludge.

5 The sludge discharge pump can deliver the concentrated sludge to an OSV, to a larger tank provided by others or to an incinerator, whatever best fits the special requirements of the vessel or platform.

6 Aeration ensures that the entire contents are mixed, permitting the sludge discharge pump to empty the space-efficient flat bottom tank.

Please see MarineFAST® BMS Reference Data for sizing.

MarineFAST® SEWAGE TREATMENT SYSTEMS

PROVEN EVERYDAY SERVICE

With decades of proven results and more than 50,000 land/marine installations, FAST systems have been used from harbor tugs to cruise ships and from single homes to small cities. The largest MarineFAST systems process more than 195,000 gpd (739 m3/d) and the largest land FAST systems process more than 1.5 mgpd (5,680 m3/d).

Proven Technology

This is well established technology and is based upon the proven Biosolids Management System process used in our land MyFAST® systems.

SIMPLE PROCESS

Using ordinary pumps, blowers and controls already familiar to vessel personnel, the sophistication of the BMS component is inherent in the state of the art process and the knowhow needed to get maximum benefit from it.

Other Benefits

Aerobic process and ABS deep tank standards – no corrosion or terrible odors. All machinery, piping and controls meet USCG requirements for inspected vessels.

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