



## ESSEX LOX EQUIPMENT SELECTED BY JAPANESE MINISTRY OF DEFENSE

On March 11, 2011, the most powerful earthquake ever known to hit Japan occurred off their Pacific coast. With a magnitude of 9.0, the earthquake triggered massive tsunami waves which travelled inland, causing meltdowns at three nuclear reactors.



A wave approaches Miyako City from the Heigawa estuary in Iwate Prefecture after the magnitude 9.0 earthquake struck the area March 11, 2011. Picture taken March 11, 2011. (REUTERS/Mainichi Shimbun)

The aftermath of the earthquake and tsunami created a humanitarian crisis of epic proportion—a reported 15,867 dead, 6109 injured and 2,909 missing. Over 340,000 people were displaced from their homes and the area suffered shortages of food, water, shelter, medicine and fuel.

The Japanese Ministry of Defense (JMOD) immediately mobilized their Self Defense Forces (JSDF) to search for and aid survivors. In their medical relief efforts, they dealt with widespread power outages and serious problems locating and deploying gaseous oxygen in the field to the victims.

The JSDF teams knew they needed ways to be more effective and efficient first responders in the event of future disasters.

Mr. Daiki Yamaguchi, Vice President at Nasam, has a strong relationship with JMOD, having been a member of the Japanese Air Force for ten years. Located in San Francisco, Nasam is the exclusive distributor for Essex platform controls and life support equipment to Japan.

When the earthquake occurred, Daiki was actually on the 11th floor of the JMOD building in Tokyo, briefing them on various Essex products. Stranded in Japan for three weeks and seeing the challenges faced by the JSDF, he provided information to officials regarding the Essex line of liquid oxygen (LOX) life support equipment and how it could improve their rescue operations.

In October of 2011, Daiki arranged a meeting in Japan for Essex team members to brief and demonstrate our LOX equipment to over 100 key members of the JSDF. Impressed by the technology and the capability of these devices, JMOD placed an initial order for three Essex systems.



ALOS satellite view of Sendai in the Tohoku region showing the extensive flooding of the airport and vicinity. (JAXA)

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The JMOD selected the Essex Backpack Medical Oxygen System (BMOS) device to support their fleet of air ambulances. BMOS Filling Stations (BMOS-FS) were also purchased to provide a portable means of quickly filling/refilling the BMOS on location. Oxygen Generator and Liquefiers (OGL) were chosen to provide the capability for producing large quantities of LOX in remote locations.

After their evaluation of these first three units, JMOD ordered 84 BMOS, 23 BMOS-FS and 23 OGL for shipment in 2012. Manuals and other documentation were provided prior to shipping the equipment for translation to Japanese. At their request, all the units were painted a specific shade of green to match their other equipment. BMOS also was submitted and received the Japanese FDA equivalent registration.



**Essex employees prepare for the first OGL shipment to the Japanese Ministry of Defense.**

The Essex LOX equipment is being held at the Tokyo Japan-Yoga Army Depot and is intended for use at multiple bases throughout Japan and the island of Okinawa.

In January 2013, Essex and Nasam personnel traveled to Japan to demonstrate the equipment and train 43 select JSDF medevac soldiers and their leaders on field based product operation, interaction between units and maintenance. Each of these soldiers then traveled back to their individual bases, as “super users”, to train and educate others in the same manner.



**Jim Neumeier, Director of Sales & Business Development, Life Support Systems, Phil Daniels, Sustainment Engineer and Randy Scharfenberg, Product Integration Manager, in Tokyo, Japan to deliver training on the OGL, BMOS and BMOS-FS to the Japan Self-Defense Forces (JSDF).**

JMOD has estimated their requirements for BMOS through 2015 will total 230 units. They have received approval from the Japanese Ministry of Finance (JMOF) to purchase an additional 10 BMOS in 2013, along with another BMOS-FS and OGL.

Currently, the JSDF are evaluating the NPTLOX for service on their aero-medical evacuation platforms, in the same manner as the United States Air Force. Other Essex products, such as the MMOS, ALOX and MODS also have potential for emergency medical preparedness.

Japan and other countries within the Pacific Rim live under the constant threat of natural disasters. Rescue agencies know that systems for mass oxygen distribution can be crucial to saving lives when emergencies occur. Essex Industries has the technology and equipment available to meet those critical requirements when needed.



**The Essex Backpack Medical Oxygen System Filling Station (BMOS-FS), Backpack Medical Oxygen System (BMOS) and the Oxygen Generator and Liquefier (OGL).**

**ESSEX**<sup>™</sup>  
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