

“Stove-top Cooking Fires Eliminated on Sasebo Base”



United States
Navy
Sasebo, Japan



Sasebo History:

The Sasebo Naval Station began operations on July 1st 1889, originally as headquarters for the Imperial Japanese Navy's third Naval District. The Imperial Japanese Navy employed some 50,000 people at the Sasebo Naval Arsenal at the peak of World War II. On September 22, 1945, the 5th Marine Division landed at Sasebo, and in June 1946, U.S. Fleet Activities were formally established.

Sasebo Housing:

Navy Family Housing in Sasebo has two separate locations: 148 units are located at Main Base and 448 units are located in Hario Village. There are 7 high rise buildings and some townhouses within the housing portfolio. Each of these units has electric coiled ranges.

The Problem

Stove top cooking is the “Number One cause of household fire” in North America and on U.S. military bases globally. Cooking left unattended is the number one reason for these fires. Sasebo has approximately 600 family housing units on its base all of which are equipped with electric stoves. According to Sasebo Fire Prevention Chief Moses Gibbs III, unattended cooking is the number one cause of household fire and fire related incidents on the Sasebo base and why Sasebo decided to take action.

The cause of these fires is typically related to unattended cooking, that is the cook turns on the stove and leaves the room or the housing unit while cooking. Oil left unattended can quickly result in a grease fire. These grease fires once they have reached ignition point tend to accelerate quickly igniting everything within the vicinity of the stove (cabinets, curtains, floors etc.).

To date fire prevention efforts on the base have focused on prevention and fire safety education (i.e. how to prevent a cooking fire from happening and what to do if a cooking fire does occur) with great success. Over the past six years Sasebo's fire prevention team, through its fire safety and prevention programs, has successfully controlled the problem, preventing major fire casualties and property damage. However, human nature being what it is and the difficulties associated with changing some behaviors as it relates to unattended cooking, the Sasebo fire prevention team realized that while fire safety and prevention programs were helping to curtail these incidents, education alone would not eliminate the problem.

The Solution: Public Education/Prevention AND the Safe-T-element® cooking system

In the summer of 2007 the Sasebo fire prevention team began looking for an engineering solution to help support their fire safety education and prevention initiatives, helping to reduce stovetop cooking fires and cooking related fire incidents on base. Sasebo purchased its first Safe-T-element® unit in the spring of 2007 as a trial to see how the product performed. Based on the success of that trial Sasebo purchased Safe-T-elements to equip 545 ranges in June 2007 and began implementing them in housing units on base over time. Since that time Sasebo has purchased Safe-T-elements to equip an additional 95 ranges with a view to equipping the entire base with the technology. At present 95 % of the housing units at Sasebo are equipped with the Safe-T-element® technology.

“I believe in this product and our installation program has been a complete success.”

Moses Gibbs III, Fire Prevention Chief – Sasebo Naval Station, Japan

What is the Safe-T-element® cooking system and how does it work?

The Safe-T-element® cooking system is a patented fire prevention technology. Unlike other technologies that either suppress fire or alert you to the fact that there is a fire, the Safe-T-element® cooking system helps to prevent these fires from starting in the first place.

And while unattended cooking is the cause of most cooking related fires, Safe-T-element® has also been designed to help prevent fires that start when most common household materials are accidentally left too close to or in direct contact with a stovetop element. This is because Safe-T-element® will not allow the burner to reach a temperature where most common household materials will ignite.

The technology functions as a limiter, controlling the maximum temperature of the stovetop. The Safe-T-element® system includes round, cast-iron plates that are installed over each burner on an electric stove, and individual control units inside the stove that regulate the heat delivered by the burner. Fat or oil will ignite at temperatures as low as 698°F/370°C. The Safe-T-element® control unit automatically shuts off the burner when the plate reaches 662°F/350°C, then switches it on again when the plate temperature falls slightly below 662°F/350°C. The maximum temperature reached by the plate, 662°F/350°C (a regular burner on high on an unregulated electric range can reach over 1300°F/700°C), is below the level where oil, grease, unattended food, or paper or clothing can catch fire.

The user cooks as usual with no noticeable decrease in cooking efficiency. And because the stovetop cycles on and off during the cooking process the stovetop uses less energy. Safe-T-element® is available as both a retrofit for existing stoves and pre-installed on new ranges.

The Results

Starting in 2007 the Safe-T-element® cooking system was implemented over time as part of Sasebo’s overall fire prevention program. The Safe-T-element® was installed as housing units were being renovated or before new personnel moved in to ensure a seamless transition. As the product began being installed in 2007 the base started to see an additional decline in unattended cooking incidents and stovetop cooking fires. By the beginning of 2008 approximately 95% of Sasebo’s housing units were equipped with the Safe-T-element® technology. **During 2008/09 Sasebo’s fire education and prevention efforts in combination with the installation of the Safe-T-element® technology resulted in the elimination of ALL stovetop cooking fires throughout the CNFJ/CFAS Sasebo Military Installations.**

Safe-T-element® is now mandated for all stoves in residential housing at the Sasebo Naval Station. All scope of work, engineering and technical drawings include the Safe-T-element® technology as a requirement.

“This product does everything it is supposed to do – helps eliminate cooking fires.”

Fire Chief, Gerald Clark – Commander U.S. Naval Forces Fleet Activity Sasebo, Japan

Safe-T-element® is currently installed at Cape Canaveral Air Station (FL), Eielson AFB (AK), Ellsworth AFB (SD), Nellis AFB (NV), Randolph AFB (TX), Tyndall AFB (FL), Wright Patterson AFB (OH), Kadena AFB (Japan), Hickam AFB (HI), Alice Springs AFB (Australia), Sasebo Naval Station (Japan), Fort Campbell (KY), Norfolk Naval Station (VA), Elmendorf AFB (AK), Naval Air Station Jacksonville (FL), Arnold AFB (TN), Dyess AFB (TX), Actus Lend Lease (Various), Forest City Enterprises (Various), Hawaii Military Communities (HI), Misawa AFB (Japan), Yokota AFB (Japan), RAF Alconbury (UK), Malmstrom AFB (MT), and Naval Base Kitsap (WA).

Safe-T-element® is now recognized by the U.S. Military for both commercial and residential housing applications:

Safe-T-element® was originally recognized by the US Air Force’s Civil Engineer Support Agency as an alternative means of compliance with the military’s UFC 3-600-01 military code requirement for a range fire safety system. At present Safe-T-element® is one of only two technologies that **MUST** be used for all US Air Force “commercial” stove installations.

Pioneering is an approved supplier to the U.S. Government and is certified, recognized or endorsed by the following organizations:



Protecting Properties, Reducing Energy and Saving Lives.

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