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# LIFE SAVING ROCKETS IN SWEDEN. A CENTURY OF OPERATION

**Abstract**

The industrialization in the early 19th century gave rise to a major growth in sea-way transportations in European waters. A direct result of this was a rapid increase in sea disasters, in particular in coastal areas. The United Kingdom was the first nation to implement rescue services around its coasts, and several optional systems, in addition to traditional rescue boats, like rockets, mortars and cannons were tested. By the mid 1840's the "rocket apparatus" was implemented as a standard at many British rescue stations. The first rocket type used was the Dennett-rocket, which was of a design similar to the Congreve rockets. Rocket systems were later also designed in several other European countries with need of effective sea rescue systems.

1855 the first rescue station in Sweden was taken into service equipped with a rescue boat and a rocket apparatus of Dennett fabrication. During the following century some 40 rescue stations around the Swedish coast were equipped with rocket apparatus. Over the years to come a number of different new rocket systems were tested and some implemented. Some of the Swedish rescue stations have been preserved and are today museums and it turns out that in total some 40 rockets of different types and ages have been preserved at these museum stations. The official records of all activities conducted over a century have also been saved.

The today existing rockets have undergone a detailed technical investigation as for the design, performance and operation. Steps of improvements and potential influence of the general advancements of the solid rocket technology over more than a century, from the Congreve type rockets to the rockets in service at the mid of last century, have been analysed. Basically any improvements were made in small steps to advance the handling of a simple but reliable system and less to implement latest advancements in rocket technology. Like the latest rockets preserved, manufactured in 1950 and 1952, the major bulk of rockets used until the mid 20's century were of a Congreve-similar design with the stick guidance concept. The simplicity and conservative evolution to improve the range is also reflected in the use of a "compound"-type of staging for two- and three-stage rockets.