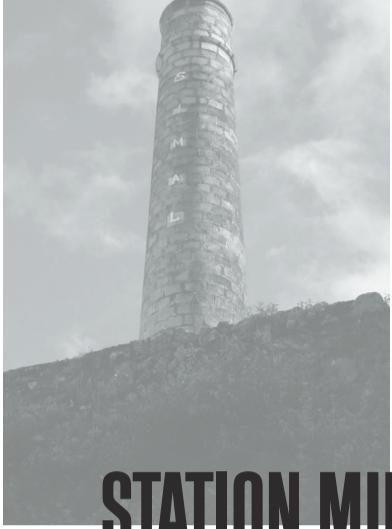


# PORTO PIM WHALING STATION MUSEUM

## PORTO PIM WHALING



## STATION MUSEUM

The whale processing factory in Porto Pim started its activity in 1942 during World War II, while whale oil exportation was at its apogee. The factory was owned by SIMAL - Sociedade Industrial Marítima Açoriana, Lda., a company counting 25 partners, like the Lisbon based manufacturer Francisco Marcelino dos Reis and the local company Costa & Martins, Lda., amongst others. The objectives of SIMAL were the integral processing of sperm whales and other marine species and the commercialization of the products.

The factory had advanced technology for the time. The owners purchased most of the machinery in foreign countries. The whole bonemeal and meat meal production equipment was made by the renowned Norwegian company Myrens Verksted and the engines were German made Deutz. The factory was powered by steam produced by two boilers (built in 1904) with a total heating surface of 250 square meters.



The production capacity was 65 tons of oil and 6 tons of meals. 1940 sperm-whale were processed and 44 thousand barrels of oil were produced during the factory's 30 years of labour. In 1974, due to the worldwide decline of the whaling industry, the factory closed its doors.

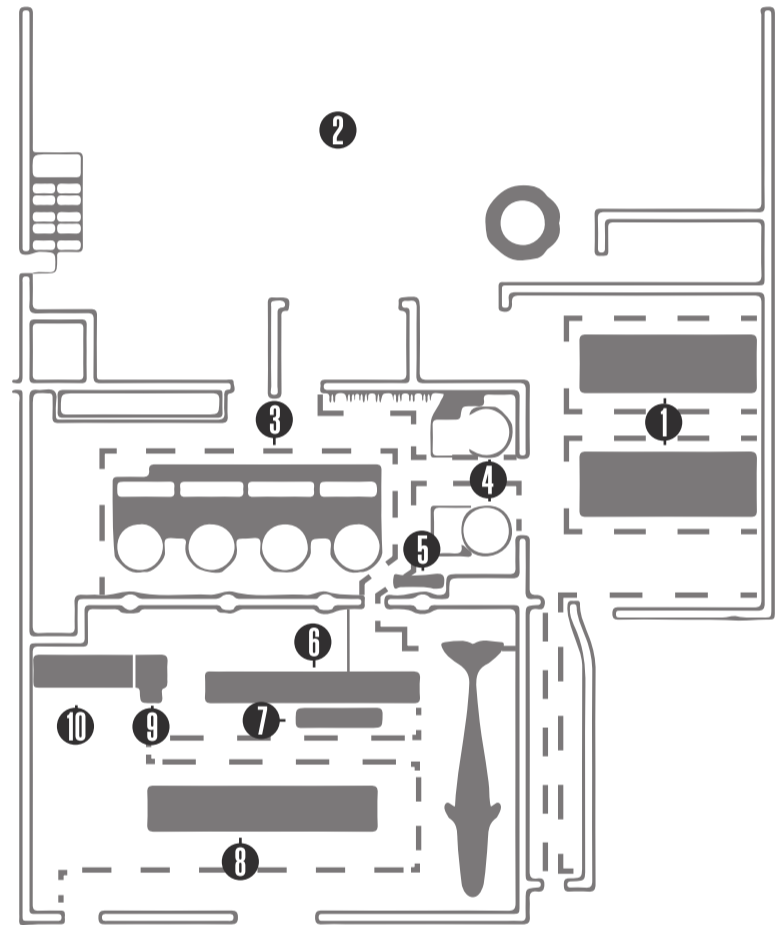
The Regional Government of the Azores acquired the complex in 1980 and classified it in 1984 as a Building of Public interest. After restoration and rehabilitation works on the building and the machinery, it was inaugurated in 2000 as Centro do Mar during the second edition of the Expopescas fisheries congress, as a scientific and cultural promotion space. In 2004, it became the head office of the Observatório do Mar dos Açores.

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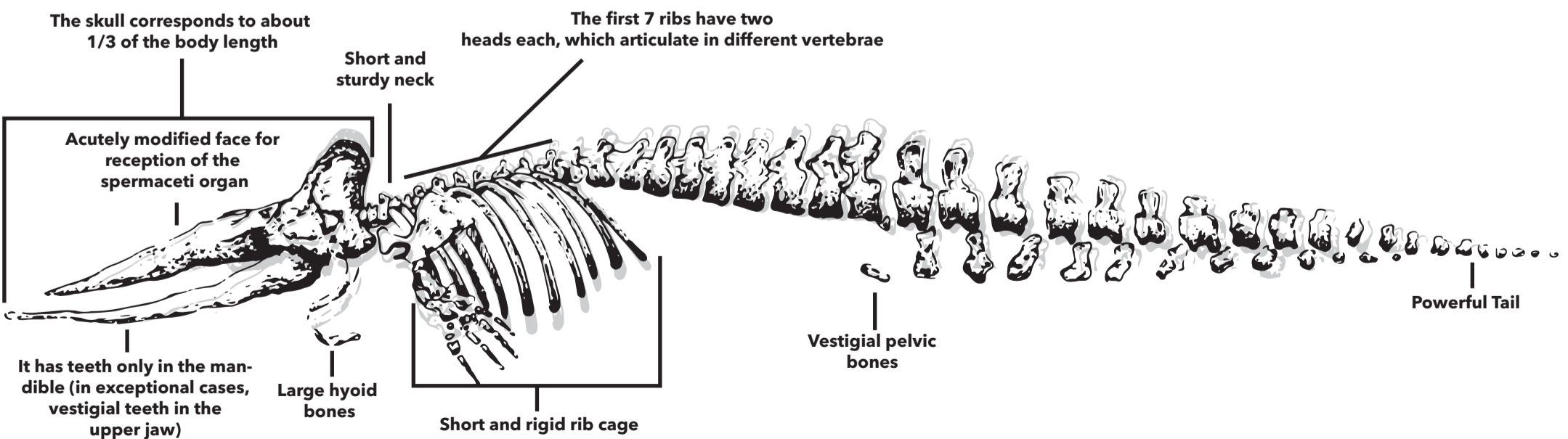
## MAP

## PORTO PIM WHALLING STATION MUSEUM

- ① STEAM BOILERS
- ② FLENSING PLATFORM
- ③ BLUBBER COOKERS
- ④ BONE COOKERS
- ⑤ MEAT GRINDER
- ⑥ MEAT COOKER
- ⑦ MEAT SQUEEZER
- ⑧ MEAT DRYER
- ⑨ HAMMER MILL
- ⑩ MEAT SIEVES

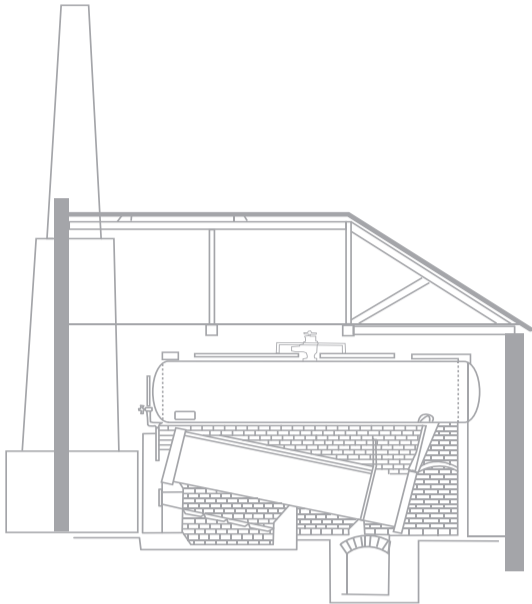


## SPERM WHALE SKELETON



## 1 STEAM BOILERS

The two boilers, with 130 and 120 square meters of heating surface produced the steam which was needed to run the winches, the cookers for blubber and bones, the cooker, the meat dryer and for the heating oil in underground tanks. The fuel was wood from the island of Pico. Manufactured in Porto, Portugal (1904).



## 2 FLENSING PLATFORM

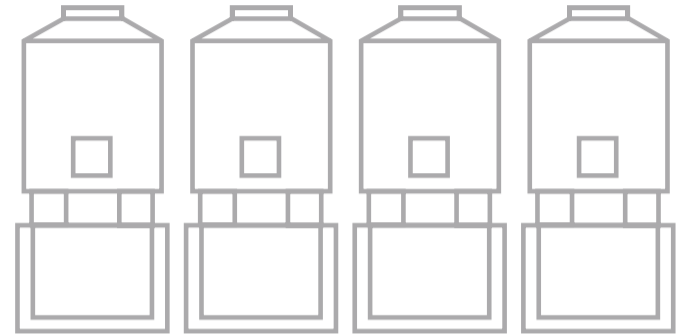
The seaside courtyard is equipped with three steam powered winches to pull the whales out of the water and for the handling and segmentation of the bodies and is dominated by the chimney of the steam boilers exhibiting the name of the company, SIMAL. After having been captured, the sperm whales were towed by a motorboat to the Bay of Porto Pim, where they remained on a mooring until being hauled to the ramp of the factory.

First, the whale was lifted slowly onto the platform with the winches, and then the head was cut off and carried to one corner of the patio. Meanwhile, the workers started dismembering the body, cutting off the blubber coat, which, cut in smaller pieces, was then inserted into the cookers. Then, the meat was separated from the bones, minced, dried and ground to meal. The bones were cut in pieces and inserted into the corresponding cookers. The blood occurring during the dismembering was collected through conduits which are visible in the floor of the patio. On the right side of the platform, one can see the blood collection tank. The blood was mixed with lime until forming a paste, which was then dried and turned into meal.

## COOKERS HALL

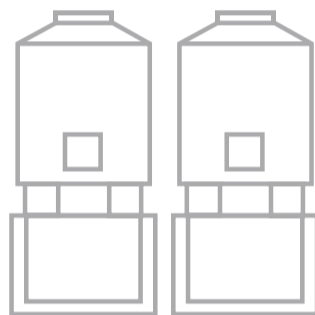
### 3 COOKERS FOR BLUBBER

The four cookers for oil extraction are equipped with a built-in grid to avoid the blubber chunks to fall through and to help the flow of the oil. After the melting process which took about eight hours, the oil was directed through a pipe work to a measuring container and then to the subterranean storage tanks. Each cooker has a capacity of 11 m<sup>3</sup>.



### 4 BONE COOKERS

These cookers, without iron grill, were used to cook the bones and other harder parts of the sperm whales, like the tail and the pectoral fins, to obtain oil. After the cooking, the bones were dried on the factory's courtyard, then ground to bonemeal in the hammer mill. The oil obtained in the cookers was directed through tubes to a measuring container and then to a subterranean storage tank.



### 5 MEAT GRINDER

#### FIRST STEP OF THE MEAT MEAL PROCESS

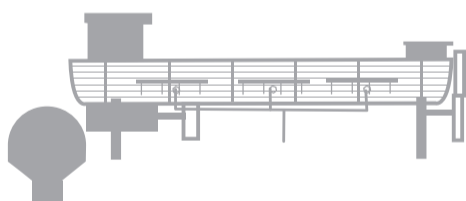
The meat, after having been cut in pieces on the platform, was transported on a wheelbarrow and introduced into the grinder. The minced meat was then forwarded by a bucket conveyor to the meat cooker. This mincing machine was powered by a 30 hp diesel engine and was built in Norway by Myrens Verksted.



## MEAL PROCESSING HALL

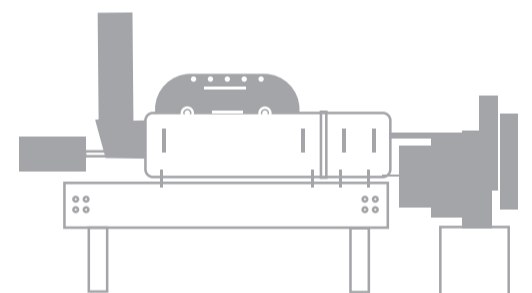
### 6 MEAT COOKER

The meat cooker was built to work with steam produced by the boilers. The meat was cooked four hours, and then forwarded to the press by a spiral conveyor powered by a 30 hp diesel engine. The cooker was built in Norway by Myrens Verksted.



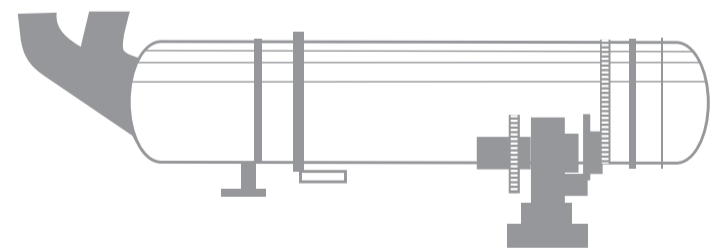
### 7 MEAT SQUEEZER

This machine was used for the removal of liquids, blood and water, remaining in the cooked meat. After the pressing, the meat was forwarded to the dryer by a bucket conveyor. This machine was powered by a 30 hp diesel engine and was built in Norway by Myrens Verksted.



### 8 MEAT DRYER

Its function was the complete removal of water from the meat. The heat was provided by the steam boilers and the circular motion by an 18 hp engine. After drying, the meat was forwarded to the mill by a belt conveyor. Made in Norway by Myrens Verksted.



### 9 HAMMER MILL

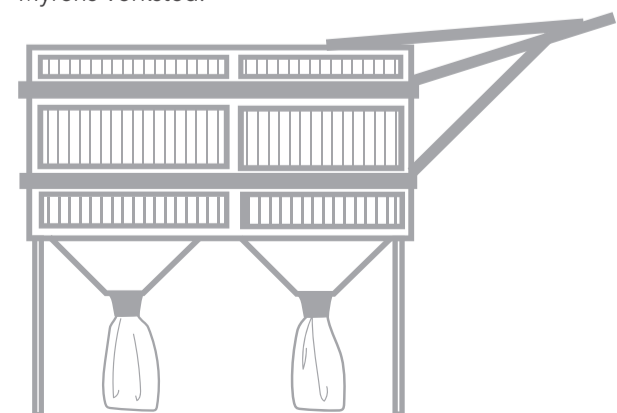
This mill was used to grind the dried meat which was then forwarded to the sieve by a bucket conveyor. The bones, after being cooked and dried, were also introduced here to produce bonemeal. This machine was powered by a 25 hp diesel engine and was built in Norway by Myrens Verksted.

## BY-PRODUCTS

Sperm whale oil was the main product of the Azorean whaling industry, its exportation being the main objective. The oil was an excellent fuel and lubricant. The bonemeal and the meat meal, rich in proteins, were considered excellent fertilizers for agriculture and food additives for cattle.

### 10 MEAL SIEVES

This machine was used to separate different graining of meals. The produce was then bagged, weighed and sold. Built in Norway by Myrens Verksted.



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