



みどり  
水士里ネット  
わいとう (Waitou)

Shinkosai pumping station

# 新小斎揚水機場

## ◇What is Pumping Station ?

A Pumping Station is a facility which reliably supplies agricultural water to the irrigation network that waters crops. The facility at Shinkosai is a two stage pumping station. The first stage consists of a main water pump, a tank, sluice gate, and all the necessary piping. There is a shed that houses all the machinery. The second stage is very simple and requires no equipment housing. It is comprised of a single centrifugal or underwater pump.

## ◇Usage of Water

As the saying goes, "Water is the source of life." No living creature, animals or plant, can live without it. Thus, water is a fundamental component of agriculture. We use it to irrigate our fields of crops. Plants that are properly watered yield abundant harvests.

In order to achieve this, water must be taken from an available source and transported to where the plants are growing. Irrigation networks are built to deliver water from dams, reservoirs, and rivers to crop fields. The irrigation system must supply adequate flow and drainage if the plants are to flourish

A Pumping Station is an important part of any irrigation system. It enables agricultural water to reach places that are higher than the source of water. Shinkosai Pumping Station supplies water to the districts of Fujio, Shimada, Edano, Kosai, and Kaneyama, an area of approximately 804.1 hectares.

## ◇History of Shinkosai

Before Shinkosai Pumping Station was built, there were three separate pumping stations that supplied water only to their own districts. They were Maehara Station (District of Edano), Maenami Station (Kosai), Kaneyama Station (Kaneyama). However, the bed of the Abukuma River (source) began to change. This brought about sufficient expense and labor difficulties such that there was an immediate need to build an emergency two-stage Pumping Station.

So, in 1978, under the Prefectural Irrigation Drainage Project, the three stations were unified and combined into the two stage Shinkosai Pumping Station.

## ◇The Scale of Facility

The size of the pumps are 800mm 265 kw and 700mm 195kw.

( vertical-axil mixed flow pump)

Q(Quantity)= 2.09 m<sup>3</sup>/sec.

An average size of an elementary school pool is 25m long, 13m width, 1m depth. It holds water of 325m<sup>3</sup>. The pumps are able to take this much water in about 2 minutes and 30 seconds.

The cost of electricity is 2,760 yen an hour and 66,240 yen per day.



First, the water is taken in at the mouth of the diversion.

Then the water pumped out from the station goes through the waterway into the rice fields.

