

WHALE

Of a Scale

Water and corrosion have always been the enemies of industrial equipment and scales and weighing equipment are no exception. Special precautions must be taken to resist damage from these elements and reduce exposure wherever possible. But what do you do

stainless steel for all components, including the load cells, due to the tremendous corrosion from the salt water. "I wouldn't even dream of putting electronic load cells into that environment, hermetically sealed or not," said Hilley. Since he knew they would not hold up under those condi-

a lifetime warranty against water and electrical damage."

Emery Winslow engineers, working closely with Robin Friday, manager of animal training at Sea World, designed a special 9 by 15-foot platform, with a structural capacity of 40,000 pounds, that will allow the



A killer whale slides up on a 9 by 15 foot platform scale design to hold up to 40,000 pounds.

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when somebody wants to permanently install a large platform scale on the shelf of a two million gallon pool, in 8 inches of 55 degree salt water, to weigh 10,000 pound killer whales? That's the question that Sea World of Florida put to Fred Hilley of Accurate Scale. An additional obstacle was Sea World's requirement for grade 316

tions, Hilley thought of Emery Winslow.

"Our Hydrostatic load cells are readily available in 316 as well as other alloys and are immune to water damage as well as salt water corrosion," says Rudi Baisch, sales manager at Emery Winslow. "Even our standard load cells are grade 304 and carry

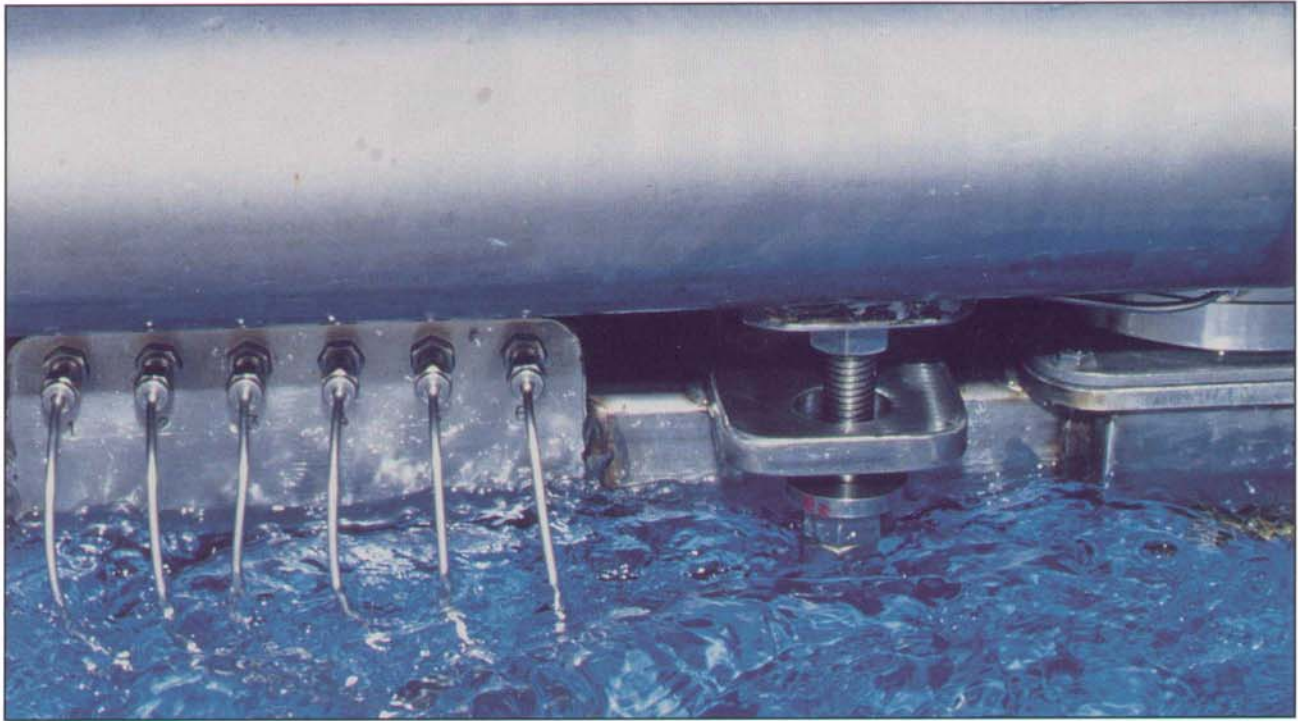
killer whales to slide up onto it under their own power. The scale has smooth, rounded edges and corners to avoid any possibility of injury. The load cells themselves are completely submerged, and only the platform is above water to reduce the effects of wave action.

"The scale uses six hydrostatic

Load cells constructed of titanium and delrin are now available for even greater corrosion protection.



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Phone 203-881-9333 • Fax 203-881-9477 • www.emerywinslow.com



With the water level lowered, the load cell(at far right) is barely visible. Stainless pressure tubing from each of the 6 load cells go to a common bulkhead, from which they are run to the totalizer enclosed.

cells, which contain less than 1 ounce of vegetable grade oil," said Baisch. When the load is applied, a sustained pressure signal is transmitted through 316 capillary tubing (.125-inch O.D.)

makes our equipment so ideal for more typical applications in the food and chemical process industries where washdown, flooding and corrosion are commonplace," said Baisch.

reliability. Using vegetable grade oil was an added bonus, even though the entire scale uses less than one full cup.

The scale has allowed Sea World to attain a whole new level of animal husbandry. The old way of weighing by putting marine mammals in a sling and picking them up by crane has been eliminated. The Emery Winslow scale can be used many times a day if necessary to help monitor the animals' diet and health, which is of particular concern with pregnant killer whales.

Since the scale has been installed, Accurate Scale and Emery Winslow have provided other whale scales to Sea World, as well as scales for walrus and polar bears. These scales will be part of Sea World's new Arctic Exhibit which is scheduled to open this year.

"This installation at Sea World was one of the first under Emery Winslow's new distributor program, launched in the Southeastern USA," said Ed Hollenbeck, the regional distributor manager. Hollenbeck provided training and technical assistance to Accurate Scale's technicians, ensuring the best possible installation. "The end result speaks for itself—a satisfied customer, distributor and manufacturer," he says. "As you can see in the photo, even the whale is smiling."



The digital indicator and the enclosed totalizer are housed outside, so the trainer can easily command the whale onto the scale while viewing the indicator.

to the Emery Winslow totalizer, which sums the signals and transduces the result into a single millivolt output. This conversion takes place in a dry instrument enclosure, away from the elements that can harm electronics. There is actually no movement of the fluid at all, hence the term hydrostatic. "This is the same technology that

Friday was very pleased with the results. Anything less than 316 stainless steel would have had very limited life and must be used for gates, valves and numerous other pieces of equipment at Sea World. Installing a scale with no electronic components or cables in the water was an obvious choice for safety as well as product

Call or fax for additional information on our full line of scale products to solve tough weighing problems.