

RECLAMATION

Managing Water in the West

Crane Load Test Water Bags: Pathway, Inspection and Decontamination



U.S. Department of the Interior
Bureau of Reclamation

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Managing Water in the West

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CAPACITY 275 TONS



Crane Use

- **Cranes at construction sites; operational uses**
- **Many crane configurations**
- **Cranes are needed to remove & re-install generator, shaft, turbine and other dam components**



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Water Bags

- Crane testing for safety
- Becoming the test method
- Bulk weight costly to move
- Possible AIS pathway
- Extensively used
- Inspection and decon issues
- Industry cooperation key



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Water Bag Use

- **Equivalent water volume weight**
- **If raw water used, assume contamination**
- **Inspection difficult**
- **Low probability for attached adult mussel**
- **Higher probability for veligers in bag residue water**

Water Bag Decontamination

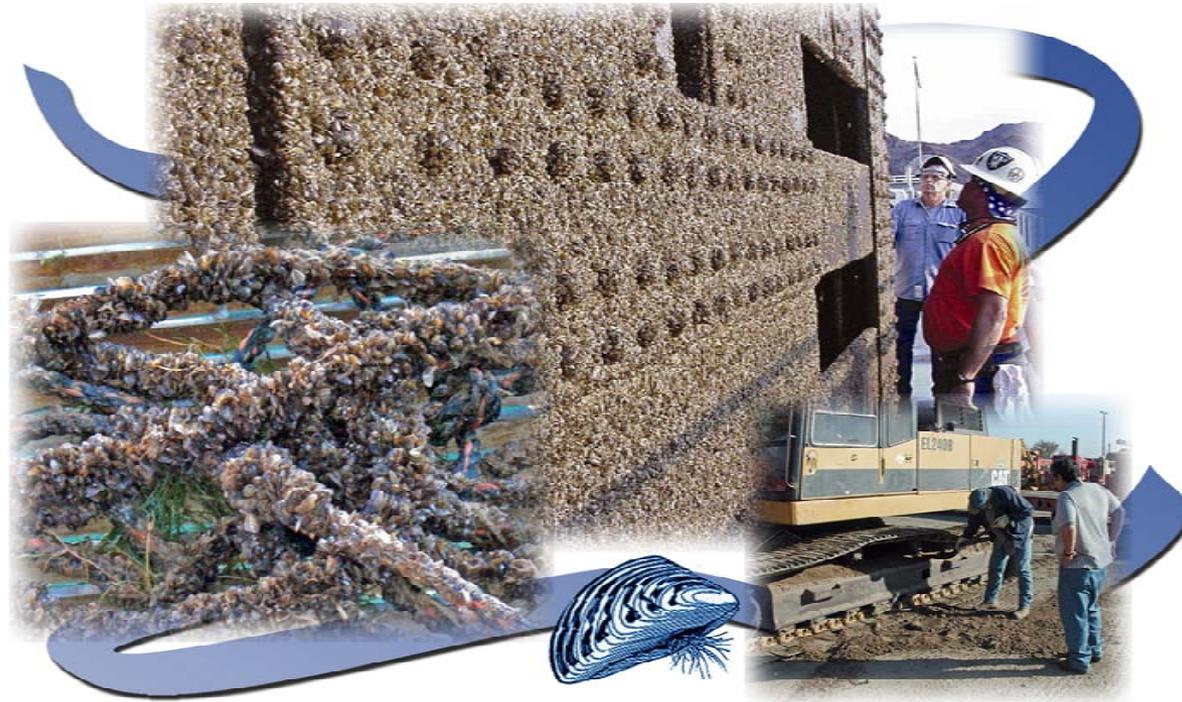
- Contamination avoidance – potable water
- Chemical – wastewater & quantity disposal issues
- Heat – hot water pressure wash
- Desiccation – most common current decon method
 - Hang, drain and dry; time consuming
 - Assisted by fan circulated air
- Freezing – a promising additional method

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Managing Water in the West

Technical Memorandum No. 86-68220-07-05

Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species





Water Weights

Angelo Cimini

Vice President

Multiple locations nationwide

www.waterweights.com

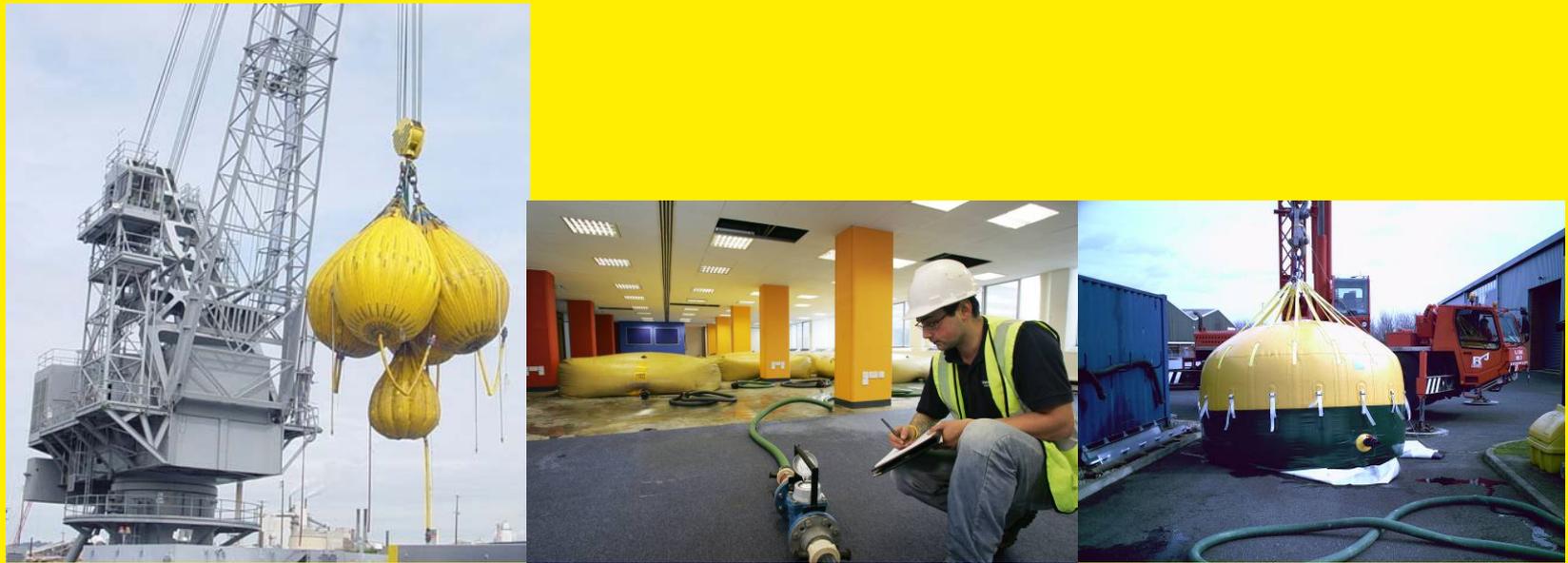


ISO 9001:2008
FS 96689



Contract Holder

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What are Water Weights?

Water Weights proof load test bags are used for suspended or deck loads up to 1000 tons.

The highly certified system allows safe, practical and economical use of water as a weight for load testing.

Water Weights are used for:



- cranes
- davits
- lifeboats
- bridges & ramps
- structural tests
- elevators & conveyors
- ballast & counterweight
- various types of lifting equipment



History of Imes:

- Originated 1979 with Water Weights™
- Established network of agents and distributors worldwide
- 1991 opened first U.S. depot
- Today 7 locations nationwide
- Services range from load testing, to specialist offshore and waterfront engineering support services, to the Trident Strategic Weapons System Program

Water Weights global network:

Australia

Bangladesh

Belgium

Brazil

Canada

Denmark

Egypt

France

Germany

Greece

Holland

Hong Kong

India

Italy

Korea

Malaysia

Mexico

Norway

Pakistan

Singapore

South Africa

Sri-Lanka

Sweden

Taiwan

Turkey

UAE

United Kingdom

USA

Typical transport and labor savings of a 100T test:

Performed with conventional weights requires 5 tractor trailers and 5 personnel on site



Performed with Water Weights™ Requires 1 pickup truck with trailer and 2 personnel on site



Certification:



ISO 9001:2008
FS 96689



- Water Weights system of load testing is certified in accordance with government and industry requirements
- Each bag has a minimum factor of safety in excess of 6:1
- Physically proof load tested to a minimum of twice it's rated capacity before being placed into service
- Each bag is inspected, repaired and recertified internally according to our safety manual prior to each mobilization from our facilities
- Imes is registered and certified to ISO 9001:2008

- Originators of the water filled proof load bag designed to provide a test weight in place of costly and cumbersome solid weights
- Began managing for ANS when involved in projects for the Tennessee Valley Authority (TVA) earlier in the decade
- Program evolved into a further commitment to protect our environment
 - Studies and actions for non-contamination of water during discharge/return
 - Turbidity awareness measures so local sediment is not affected by testing operations
 - Additional ANS mitigation procedures

Our internal procedures to prevent spread of ANS:

The following slides outline how Water Weights™ inspection procedures address the challenge of unintentional introduction of ANS into our waterways through the crane testing industry.

The following is applicable to all Water Weights™ bags that are specified for use in areas that require a program to mitigate and prevent spread of Aquatic Nuisance Species in US waterways.



All Bags are cleaned both internally and externally before and after mobilization at our facilities to ensure ANS are not inadvertently transported to other sites.



- Equipment is dried internally using industrial high speed blower prior to folding

Blower line





- Standard 1019 bag inspection procedure commences after the inside of bag is fully drained and dry



- Final drying of internal and external components of the water bag
- Reassembly of rigging components
- Freezing - earlier studies indicate that cold soak down to -10 C. will kill zebra and quagga mussels at a specific exposure time in laboratory conditions



- Green “fit for use” tag is attached
- Bags are ready, and shipped for use in various facilities



Next Steps and Partnership Opportunities:

- Imes is open to working with ANS organizations to increase efficacy of control methods for target species.
- We support development of a third party ANS certification program for water bag decontamination.
- We offer to help with visibility, and to stress importance of ANS mitigation in industry.



Water Weights

www.imesinc.com



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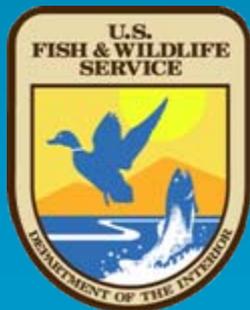


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It's in the bag.... or is it?

Coordinating with the Crane Weight Industry



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It's in the bag.... or is it?

Coordinating with the Crane Weight Industry



- Over 100 companies and consultants involved in crane certification in the U.S.
- It's unlikely that all adequately address AIS
- Competitive industry ≠ shared strategies
- Opportunity for ANSTF member leadership

It's in the bag.... or is it?

Coordinating with the Crane Weight Industry

- Opportunity for pilot project?
- Incorporate recognition of pathway, and management strategies, into existing ANSTF documents?
- What other unique industry pathways are out there?
- How can ANSTF better engage new industry partners?

