

Remr Management Systems Navigation Structures Users Manual For Inspection And Rating Software Version 20 Technical Report

The U.S. Army Corps of Engineers operates approximately 270 navigation lock chambers constructed of plain or reinforced concrete. Many of these structures require, or will require significant repairs to ensure safe and efficient operations. Modern engineering technology is providing procedures for performing condition surveys, consistent and quantitative conditions assessment, and data base management. Combined with economic analyses, these procedures afford efficient maintenance and repair (M and R) budget planning through the evaluation of current condition and the comparison of various M and R alternatives based on life cycle costs. Collectively these procedures are called the Repair, Evaluation, Maintenance and Rehabilitation (REMR) Management System. The LOCKWALL program documented in this manual addresses the REMR aspects of concrete navigation lock monoliths.

Continuing the tradition of the best-selling Handbook of Structural Engineering, this second edition is a comprehensive reference to the broad spectrum of structural engineering, encapsulating the theoretical, practical, and computational aspects of the field. The authors address a myriad of topics, covering both traditional and innovative approaches to analysis, design, and rehabilitation. The second edition has been expanded and reorganized to be more informative and cohesive. It also follows the developments that have emerged in the field since the previous edition, such as advanced analysis for structural design, performance-based design of earthquake-resistant structures, lifecycle evaluation and condition assessment of existing structures, the use of high-performance materials for construction, and design for safety. Additionally, the book includes numerous tables, charts, and equations, as well as extensive references, reading lists, and websites for further study or more in-depth information. Emphasizing practical applications and easy implementation, this text reflects the increasingly global nature of engineering, compiling the efforts of an international panel of experts from industry and academia. This is a necessity for anyone studying or practicing in the field of structural engineering. New to this edition Fundamental theories of structural dynamics Advanced analysis Wind and earthquake-resistant design Design of prestressed concrete, masonry, timber, and glass structures Properties, behavior, and use of high-performance steel, concrete, and fiber-reinforced polymers Semirigid frame structures Structural bracing Structural design for fire safety

Repair, Evaluation, Maintenance, and Rehabilitation Research Program. REMR Management Systems - Navigational Structures. Condition Rating Procedures for Tainter and Butterfly Valves

Forensic Engineering

REMR Management Systems--navigation and Reservoir Structures, Condition Rating Procedures for Concrete in Gravity Dams, Retaining Walls, and Spillways

Monthly Catalog of United States Government Publications

REMR Management Systems--navigation Structures

Energy and Water Development Appropriations for 1993: Corps of Engineers, Lower Mississippi Valley Division

The US Army Corps of Engineers' Repair, Evaluation, Maintenance, and Rehabilitation (REMR) Research Program was created to identify and develop effective and affordable technology for maintaining and extending the service life of existing civil works structures Modern engineering technology is providing procedures for performing condition surveys, consistent and quantitative condition assessments, and data base management that can help managers perform efficient maintenance and repair (M & R) planning. Collectively, these procedures are called the REMR Management Systems. This User's Manual describes how to use the software associated with the REMR Management Systems for miter lock gates, emptying and filling valves, sector gates, and steel sheet pile. Miter lock gates, Condition indexes, Sector gates, Economic analysis, Steel sheet pile structures, Software.

The U.S. Army Corps of Engineers established a Repair, Evaluation, Maintenance, and Rehabilitation (REMR) program to focus more attention on deterioration rates of civil works structures. A team at Iowa State University has focused on the objective to develop an inspection and rating system that uniformly and consistently describes the current condition of the equipment that operates locks, dams, and valve structures. The objective was achieved by conducting site visits and field investigations with experts from the U.S. Army Corps of Engineers and by using the experts' opinions to develop the rules that form the basis of the rating system. The following document provides a general description of the inspection and rating system, which includes the definition of a condition index and a description of operating equipment distresses. This is followed by a description of the inspection procedure and the rules for calculating condition indexes for operating equipment.

REMR Management Systems--riverine Dike and Revetment Condition Index Software (DIKECI) User's Manual

Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, One Hundredth Congress, First Session

Proceedings of the Seventh Conference, Held in Conjunction with A/E/C Systems '91, Ramada Renaissance, Washington, D.C., May 6-8, 1991

hearings before a subcommittee of the Committee on Appropriations, House of Representatives, Ninety-ninth Congress, second session

Structural Condition Assessment

Energy and Water Development Appropriations for 1993

As part of the US Army Corps of Engineers' Repair, Evaluation, Maintenance, and Rehabilitation (REMR) program, the project team at Iowa State University (ISU) has focused on the evaluation and repair of the sector gate structures within the Corps civilian projects. This report includes a uniform procedure to describe the current condition of sector gate structures. The entire inspection and rating process is based on a field inspection of the sector gate structure. During this inspection, current physical attributes of the systems are obtained. Pertinent data (gate location, inspection and maintenance histories, and historical water level) are recorded on an inspection form. The form also includes space for entering field measurements (anchorage movements, elevation changes, gate deflection, cracks, dents, and corrosion), which are used directly to rate the condition of the gate. This information is used to calculate a condition index (CI), or numerical measure from 0 to 100, of the structure's current state. The index is meant to focus management attention on those structures most likely to warrant immediate repair or further evaluation, and can be used to monitor change in the general condition over time and to serve as an approximate comparison of the condition of different structures. Evaluation methodology, Sector gates, Locks and dams.

This collection contains 58 papers on infrastructure condition assessment presented at a conference sponsored by the Facilities Management Committee of the Urban Transportation Division of ASCE, held in Boston, Massachusetts, August 25-27, 1997.

Energy and Water Development Appropriations for 1996: Corps of Engineers

REMR Management Systems-Navigation and Flood Control Structures, Condition Rating Procedures for Lock and Dam Operating Equipment

REMR Management System - Navigation Structures: A Simple Condition and Performance Rating Procedure for Riverine Stone Training Dikes and Revetments

Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, One Hundred Third Congress, First Session

Energy and Water Development Appropriations for 1988

Energy and water development appropriations for 1987

This report presents the development of condition rating procedures for tainter and butterfly filling and emptying valves for navigation lock structures. Several site visits and field investigations were conducted, experts from the U.S. Army Corps of Engineers were asked to rate the valves, and the results were compared to a preliminary version of the rating system.

Modifications were made to reflect the experts' opinions more accurately. In the following document, a general description of the current inspection and rating system is given. This includes the definition of a condition index and a description of valve distresses. A detailed description of the inspection follows. Once the inspection data is gathered, condition indexes for valves can be computed. Condition indexes, Valve distresses, Navigation structures, Locks and dams.

REMR Management Systems--navigation Structures User's Manual for Inspection and Rating Software, Version 2.0

Proceedings of the Third Congress, October 19-21, 2003, San Diego, California

Energy and Water Development Appropriations for 1991

Annual Report FY ... of the Secretary of the Army on Civil Works Activities

A Simple Condition and Performance Rating Procedure for Riverine Stone Training Dikes and Revetments

Monthly Catalogue, United States Public Documents

Civil Engineers--key to the World's Infrastructure : Proceedings of the 1995 Conference, San Diego, California, October 22-26, 1995

The U.S. Army Corps of Engineers established a Repair, Evaluation, Maintenance, and Rehabilitation (REMR) program to focus more attention on deterioration and maintenance rates of civil works structures. An Iowa State University (ISU) research team has implemented this program and developed rating and maintenance procedures for miter lock structures as well as other structural components. This supplement describes and documents updates to the original inspection procedure and rating rules for miter lock gate structures. The changes have been recommended by Corps personnel as a consequence of the application of the initial procedure.

Professional publication of the RD & A community.

Army RD & A.

Repair, Evaluation, Maintenance, and Rehabilitation Research Program. REMR Management Systems: Navigation Structures Management System for Miter Lock Gates

Art, Science, and Practice : Proceedings of the Conference Sponsored by the Facilities Management Committee of the Urban Transportation Division of the American Society of Civil Engineers

Condition Rating Procedures for Roller Dam Gates

Energy and Water Development Appropriations for 1991: Corps of Engineers ... Pt. 3. Appalachian Regional Commission ... Pt. 4. Department of Energy FY 1991 budget justifications

User's Manual for Concrete Navigation Lock Monoliths

In Structural Condition Assessment, editor-in-chief Robert T. Ratay gathers together the leading people in the field to produce the first unified resource on all aspects of structural condition assessment for strength, serviceability, restoration, adaptive reuse, code compliance, and vulnerability. Organized by the four main stages of a structural evaluation, this book provides an introduction to structural deterioration and its consequences, the business and legal aspects of conducting an evaluation, initial survey and evaluation techniques for various structures, and specific

tests for five of the most common structural materials (concrete, steel, masonry, timber and fabric.)

This report describes a simple algorithm that provides a quantitative description of the condition of riverine stone navigation training dikes and revetment. The quantitative description, called a condition index (CI), is incorporated into a REMR Management System for stone navigation training dikes and revetment. The CI is an indicator of a structure's condition and, to some extent, its functionality. The CI is obtained from an algorithm that uses field inspection data as input and is designed so that it provides consistent, repeatable, uniform results. The fundamental goals of the REMR Management System are to establish Corps-wide inspection uniformity and to establish common definitions of condition so that more effective communications concerning condition can be made. REMR Management Systems use uniform condition inspection techniques that emphasize visual, inexpensive, and efficient methods of data gathering. The Corps oversees the maintenance and repair of thousands of river bank stabilization structures and maintains an inventory of nearly 11,000 riverine training dike structures. This report addresses the condition assessments of existing stone dikes and stone dikes that will be constructed in the future.

Energy and Water Development Appropriations for 1994

REMR Management Systems--navigation Structures Condition Rating Procedures for Tainter Dam and Lock Gates

Condition Rating Procedures for Sector Gates

Government Reports Announcements & Index

REMR Management Systems--Navigation Structures

Computing in Civil Engineering and Symposium on Data Bases

This collection contains 55 papers presented at the third Forensic Congress, held in San Diego, California, October 19-21, 2003.

Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, One Hundred Second Congress, Second Session

REMR Management Systems--Navigation and Flood Control Structures, Condition Rating Procedures for Lock and Dam Operating Equipment

Transportation Congress

Infrastructure Condition Assessment

REMR Management Systems. User's Manual for Obtaining a Condition Index of a Concrete Navigation Lock

Proceedings of the ... Congress