VIRTUAL REALITY TRAINING FOR BRIDGE CRANE DATA SHEET

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LUDUS GLOBAL

LUDUS PRESENTS AN INNOVATIVE, 100% REALISTIC AND RISK-FREE TECHNOLOGY

- Improves effectiveness in the learning process of operators.
- Reduces the costs associated with training and travel.
- Reduces the number of **accidents and casualties**





VR SIMULATION

Realistic interaction with the environment:

body movement, VR headset, hand tracking, surround audio.

SUPERVISOR

A supervisor monitors the simulation and can

also perform the exercise setup

STATISTICS

Simulations keep track of each user's decision-making and performance so that it can be studied later in the classroom.



SAFETY AWARENESS

VIRTUAL REALITY SIMULATOR FOR BRIDGE CRANE

- Bridge Crane is a LUDUS product oriented to train safe handling environment of this type of cranes in an industrial ship.
- The purpose of the user is to carry out the work that is asked of him/her in a safe
 - manner and avoiding risks.
- The simulation serves both to explain the use and security measures, and to test the user in relation to the knowledge learned.
- In this product we want to give the same value to the necessary PPE as to the checks of the different lifting elements to handle different loads





FREE MODE

- In this exercise the user will be able to use the bridge crane control adapting to its handling. It has an unlimited duration, so the trainer will be able to manage the time of the practices by ending the time by itself, because each user can take different time to adapt.
- The errors that may be in the exercise are those of being placed in the trajectory of the load and/or too close while it is in motion.

LEARNING GOAL:

It is a simple exercise in which the user can adapt to the virtual controls of the machine and the simulation, being able to move around the stage as well as move the load following the safety conditions.

EXERCISE GOAL:

Adaptation: In order for the following exercises to have the necessary fluidity on the part of the user, this free mode is optimal for students to gain confidence and management with virtual reality, being able to do so in optimal safety conditions.

MODOLIBRE

TIEMPO DE EJERCICIO 00' 05"







ROADMAP

BRIDGE CRANE DEVELOPMENT ROADMAP





MACHINE PRE-USE

- What is the content:
 - The user is guided in the different checks to be performed, prior to the circuit exercises. These are:
 - Crane end-of-race check.
 - Car race finals.
 - Checking the wear of the main cable or chain.
 - Review of the main hook safety latch.
 - There is a possibility that the user will suffer an accident in the event that he or she is within walking distance of the hook when it descends, so it creates a good opportunity for the trainer to show to the user the consequences of not giving a safety distance when hooks or load descend.

> This could only be done in a completely secure environment such as virtual reality.

IMAGE NOT AVAILABLE FROM THE MACHINE'S PRE-USE PROCESS



MACHINE PRE-USE

Through this guided exercise, we want to give relevance to these checks, being also an opportunity for the user to finish acquiring the machine's handling in the simulation.

LEARNING GOAL:

Remember at the end of the training the importance of reviewing the status of the machine to be used before connecting it to a load. In this way, in his or her day-to-day life, the student will be able to avoid incidents because he/she has not made the appropriate reviews.

EXERCISE GOAL:

Awareness: A student aware of the pre-use procedure of this type of machinery is an employee aimed at implementing the necessary safety measures before connecting a load to the machinery, flatly reducing the risks arising from not performing the previous checks.

IMAGE NOT AVAILABLE FROM THE MACHINE'S PRE-USE PROCESS



LOAD CIRCUITS (Coming Soon)

What is the content:

- We have developed this exercise to give relevance to three key aspects:
 - Review and selection of necessary PPE
 - Review, select, and place lifting elements based on the type of load, which can be selected by the trainer at the beginning of the exercise.
 - Handling the machine by the student along two types of circuit, one in zigzag, and another much more complicated where the user must also have special attention to obstacles that are along the circuit.
 - Load types: Die, metal plate, coil and pipe
 - Lifting elements available: Chains and bolts, electromagnet, C hook, hooks, textile slings and lifting beam.

IMAGE NOT AVAILABLE OF THE LOAD CIRCUIT



LOAD CIRCUITS (Coming Soon)

With this unguided exercise, we seek the student to implement relevant points of the theoretical training received.

LEARNING GOAL:

It must demonstrate the necessary PPE knowledge as well as the lifting elements available in the simulation. Any failure in these respects will mean a possibility of accident. In addition, when crashing into obstacles, catchments or accidents may occur.

EXERCISE GOAL:

- Awareness: The importance of selecting the correct and in good condition PPE, as well as lifting elements, requiring a review of them as a crucial part of the exercise to avoid accidents.
- Evaluation: From the revisions to the handling of the machine along the circuits will be evaluated and will have the consequent effect on the final result, being reason for not approved due to any failure that it commits during the exercise.

IMAGE NOT AVAILABLE OF THE LOAD CIRCUIT



STATISTICS SYSTEM

BASIC STATISTICS

- **Deployed to the user** at the end of the simulation.
- **Save individual reports** for later consultation.
- In the following phases, where pre-use exercises and loaded circuits, the
 - following data will be displayed and saved:
- Exercise time
- ✓ List of mistakes made (if applicable)
- ✓ Cause of accident (if applicable)
- ✓ Errors in PPEs selection (if applicable)
- ✓ Errors in the selection of lifting elements (if applicable)
- ✓ Approved/Not Approved