



CICT - Overhead Crane

1. COURSE OBJECTIVES

a. On completion of this course you will know:

- i. How to calculate the weight of different shaped loads of varying materials
- ii. How to determine the centre of gravity of different shaped loads
- iii. How to determine the SWL of different types of rigging equipment
- iv. How to determine SWL as related to sling angles
- v. Rigging responsibilities and crane hand signals
- vi. Crane operating safety rules and regulations
- vii. How to conduct a pre-operational inspection

2. OCCUPATIONAL HEALTH AND SAFETY (OH&S) ACT

- a. Obligations of Employers, Workers, etc. 2(1)-(5)
- b. Serious Injuries and accidents 18(1)-(2)
- c. Existence of Imminent Danger 35(1)-(2)

3. OCCUPATIONAL HEALTH AND SAFETY (OH&S) REGULATION

- a. Equipment 12(1)
- b. General protection of workers 13(1)-(4)
- c. Duties of workers 14(1)-(2)
- d. Safety training 15(1), (4), (5)

4. OCCUPATIONAL HEALTH AND SAFETY (OH&S) CODE

a. PART 2- Hazard Assessment, Elimination and Control

- i. Hazard Assessment 7
- ii. Worker participation 8
- iii. Hazard elimination and control 9

b. PART 6 - Cranes, Hoists and Lifting Devices

- i. Rated load capacity 62(1)-(3)
- ii. Operator requirements 64
- iii. Log Books 65 (1)-(5)
- iv. Preventing an unsafe lift 66
- v. Load weight 68
- vi. Lift Calculation 68.1
- vii. Loads over work areas 69
- viii. Tag and Hoisting Lines 70
- ix. Hand signals 71
- x. Repairs and modifications 73
- xi. Electrical Components and functions 93
- xii. Maintenance and Inspection 94
- xiii. Safe Movement 95
- xiv. Controls 95.1

c. PART 21 – Rigging

- i. Breaking Strength 292(1)-(2)
- ii. Safety Factors 292.1(1)-(2)
- iii. Load Ratings 293(1)-(2)
- iv. Inspection 294
- v. Rigging Protection 294



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- vi. **Sling Standard** 297(1)-(4)-
- vii. **Slings** 298
- viii. **Rope wound on drum** 299(1)(2)
- ix. **Cable Clips** 300(1)-(4)
- x. **Matching Components** 302(1)-(5)
- xi. **Safety Latches** 303(1)-(4)
- xii. **Makeshift rigging and welding** 304

Rejection Criteria

- xiii. **Synthetic fibre slings** 305(1)-(4)
- xiv. **Wire Rope** 306(1)-(4)
- xv. **Electric Arc damage** 308
- xvi. **Damaged Hooks** 309

5. STANDARDS

a. Canadian Standards Association (CSA)

- i. **CSA Standard B167-08**
- ii. **CSA Standard B167-96 (R2002)**
- iii. **CSA Standard C22.1-0**
- iv. **CSA Standard C22.2 No. 33-M1984 (R2004)**
- v. **CSA Standard 167-08 4.3.3**

b. American National Standards Institute (ANSI) / American Society of Mechanical Engineers (ASME)

- i. **ASME Standard B30.9-1996**
- ii. **ASME Standard B30.20-2006**