Tel No:+97126654546 | Fax No:+97126654182 | Email: training@cmc-me.com | www.cmc-me.com



HS120:
Behavioral Based Safety (BBS) & Root Cause Analysis (RCA):
Preventing Incidents Through Behavior and Systematic Investigation

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Training Description:

This intensive training course is designed to equip participants with the knowledge, skills and practical tools to reduce workplace incidents by addressing unsafe behaviors and identifying underlying systemic causes of failures.

Behavioral Based Safety (BBS) focuses on understanding why people behave the way they do at work, reinforcing safe behaviors and creating a proactive safety culture. Root Cause Analysis (RCA) complements BBS by providing structured investigation techniques to identify the true underlying causes of accidents, near misses, equipment failures and process deviations — preventing recurrence rather than simply treating symptoms.

The training course combines behavioral psychology, safety leadership principles, incident investigation methodologies and internationally recognized RCA tools such as:

- 5 Whys
- Fishbone (Ishikawa) Diagram
- Fault Tree Analysis
- TapRooT® principles
- Human Factors Analysis
- Barrier Analysis
- Corrective & Preventive Action Planning

Participants will engage in case studies, simulations, role-plays, group workshops and real-life scenario analysis relevant to high-risk industries such as oil & gas, petrochemical, power plants, manufacturing, marine, construction, aviation, and heavy industries.

By the end of the training course, participants will be able to proactively improve safety performance, conduct effective behavioral observations, lead incident investigations and implement corrective actions that eliminate recurrence.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Understand the principles and psychology behind Behavioral Based Safety
- ✓ Identify unsafe behaviors and at-risk practices in the workplace
- ✓ Design and implement a BBS observation and feedback process
- ✓ Conduct structured incident investigations
- ✓ Apply Root Cause Analysis tools and techniques effectively
- ✓ Distinguish between immediate causes and systemic root causes
- ✓ Analyze human factors in accidents and near misses
- ✓ Develop corrective and preventive action plans
- ✓ Improve reporting culture and safety leadership engagement
- ✓ Integrate BBS and RCA into organizational safety management systems

Training Designed for:

This training course is intended for HSE Managers & Officers, Safety Engineers & Supervisors, Operations & Maintenance Supervisors, Plant Managers, Incident Investigation Team Members, Quality & Risk

Management Professionals, Reliability Engineers, HR & Training Managers involved in safety culture, Team Leaders & Line Supervisors and Anyone responsible for workplace safety and incident prevention.

Training Requirement:

"Hands on practical sessions, equipment and software will be applied during the course if required and as per the client's request."

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

FOUNDATIONS OF BEHAVIORAL BASED SAFETY (BBS)

- Introduction to Modern Safety Management
  - Evolution of workplace safety
  - Reactive vs proactive safety systems
  - Lagging vs leading indicators
  - Safety culture maturity models
- Understanding Human Behavior in Safety
  - Why people take risks
  - The psychology of unsafe acts
  - Habit formation and behavior conditioning
  - ABC Model (Antecedent–Behavior–Consequence)
- Principles of Behavioral Based Safety
  - What BBS is and what it is not
  - Key elements of successful BBS programs
  - Observation and intervention philosophy
  - Just culture vs blame culture
- Identifying Critical Behaviors
  - Defining safe and at-risk behaviors
  - Critical behavior checklists
  - Task analysis for behavioral identification
- Workshop:
  - Developing a BBS checklist for participants' workplace

DAY TWO:

IMPLEMENTING AND MANAGING BBS PROGRAMS

- Conducting Effective Behavioral Observations
  - Observation techniques
  - Avoiding bias during observation
  - Data collection methods
  - Sampling strategies
- Giving Constructive Safety Feedback

- Positive reinforcement techniques
- Coaching vs policing
- Handling resistance
- Communication skills for safety leaders

❖ Measuring and Analyzing BBS Data
- Trend analysis
- Identifying high-risk behaviors
- Converting observations into leading indicators

❖ Building a Safety Culture
- Leadership role in BBS
- Employee engagement strategies
- Overcoming barriers to reporting
- Sustaining momentum in BBS programs

❖ Case Study:
- Analysis of failed vs successful BBS implementation

DAY THREE:

FUNDAMENTALS OF ROOT CAUSE ANALYSIS (RCA)

❖ Introduction to Incident Investigation
- Why investigations fail
- Cost of accidents (direct & indirect)
- Legal and regulatory implications

❖ Understanding Causation Models
- Heinrich's Domino Theory
- Swiss Cheese Model
- Human Factors in accident causation

❖ Immediate Cause vs Root Cause
- Unsafe acts vs unsafe conditions
- Systemic failures
- Organizational contributors

❖ Evidence Collection & Interviewing Techniques
- Scene preservation
- Gathering physical and documentary evidence
- Interviewing witnesses effectively
- Avoiding leading questions

❖ Workshop:
- Mock incident investigation exercise

DAY FOUR:

ROOT CAUSE ANALYSIS TOOLS & TECHNIQUES

❖ 5 Whys Technique
- Proper application
- Avoiding superficial analysis

❖ Fishbone (Ishikawa) Diagram
- Categories: Man, Machine, Method, Material, Environment, Management

- Group brainstorming techniques

❖ Fault Tree Analysis (FTA)
- Logical event mapping
- Identifying failure pathways

❖ Barrier Analysis
- Identifying failed or missing controls
- Preventive vs mitigative barriers

❖ Human Factors & Organizational Factors
- Fatigue
- Training gaps
- Communication breakdown
- Management system failures

❖ Exercises
- Full RCA using real case study from high-risk industry

DAY FIVE:

INTEGRATING BBS & RCA FOR SUSTAINABLE SAFETY EXCELLENCE

❖ Linking Behavior with Root Causes
- Behavioral contributors in system failures
- How BBS data supports RCA
- Using RCA findings to improve behavior programs

❖ Developing Corrective & Preventive Actions (CAPA)
- SMART action planning
- Eliminating vs controlling hazards
- Hierarchy of controls integration

❖ Writing Effective Investigation Reports
- Clear documentation
- Executive summaries
- Recommendation justification

❖ Preventing Recurrence
- Monitoring effectiveness of corrective actions
- Continuous improvement cycles (PDCA)
- Auditing safety systems

❖ Final Project:
- Participants conduct complete BBS & RCA integration exercise
- Presentation and peer review

❖ POST-ASSESSMENT and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions

- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:
Aisha Relativo - Training & Career Development Manager
aisha@cmc-me.com / training@cmc-me.com
Tel.: +971 2 665 3945 or +971 2 643 6653 | Mob.: +971 52 2954615