CURRICULUM

FOR THE TRADE OF

CARGO SURVEYOR

(Port Terminals / ICS/ CFS)

UNDER

APPRENTICESHIP TRAINING SCHEME

सत्यमेव जयते

GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT& ENTREPRENEURSHIP
DIRECTORATE GENERAL OF TRAINING

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1. ACKNOWLEDGEMENT

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1. A E M T C,Mumbai
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5. CFSAI
6. CSLA

2. BACKGROUND

2. 1. Apprenticeship Training Scheme under Apprentice Act 1961

The Apprentices Act, 1961 was enacted with the objective of regulating the programme of training of apprentices in the industry by utilizing the facilities available therein for imparting on-the-job training. The Act makes it obligatory for employers in specified industries to engage apprentices in designated trades to impart Apprenticeship Training on the job in industry to school leavers and person having National Trade Certificate (ITI pass-outs) issued by National Council for Vocational Training (NCVT) to develop skilled manpower for the industry**.** There are five categories of apprentices namely**; trade apprentice, optional trade apprentice, graduate, technician and technician (vocational) apprentices.**

Qualifications and period of apprenticeship training of trade apprenticesand optional trade apprentices vary from trade to trade. The apprenticeship training consists of basic training followed by practical training. At the end of the training, the apprentices are required to appear in a trade test conducted by NCVT and those successful in the trade tests are awarded the National Apprenticeship Certificate.

The period of apprenticeship training for graduate (engineers), technician (diploma holders and technician (vocational) apprentices is one year. Certificates are awarded on completion of training by the Department of Education, Ministry of Human Resource Development.

2. 2. Changes in Industrial Scenario

Recently we have seen huge changes in the Indian industry. The Indian Industry registered an impressive growth during the last decade and half. The number of industries in India have increased manifold in the last fifteen

years especially in services and manufacturing sectors. It has been realized that India would become a prosperous and a modern state by raising skill levels, including by engaging a larger proportion of apprentices, will be critical to success; as will stronger collaboration between industry and the trainees to ensure the supply of skilled workforce and drive development through employment. Various initiatives to build up an adequate infrastructure for rapid industrialization and improve the industrial scenario in India have been taken.

2. 3. Reformation

The Apprentices Act, 1961 has been amended and brought into effect from 22nd December, 2014 to make it more responsive to industry and youth. Key amendments are as given below:

- Prescription of number of apprentices to be engaged at establishment levelinstead of trade-wise.
- Establishment can also engage apprentices in optional trades which are not designated, with the discretion of entry level qualification and syllabus.
- Scope has been extended also to non-engineering occupations.
- Establishments have been permitted to outsource basic training in an institute of their choice.
- The burden of compliance on industry has been reduced significantly.

3. RATIONALE

With the Prime Minister's call for Make in India and government's increased focus on developing coastal and inland water transportation in India, there is going to be a boom in the country's trade through water. This will lead to an ever rising need for logistics & shipping in India. An increase in cargo handling & cargo movement through water, will without a doubt, lead to an increase in the demand formarine cargo surveyors.The candidates trained in this job role will be employed with cargo surveying companies, insurance companies & various other stake holders who are involved in the transport of cargo through water. The Certificate in Cargo Surveying is ideal for those planning to start or specialise in the area, who are looking for key knowledge relating to how different types of cargo are carried, as well as appreciation of the principle responsibilities and skills of the Cargo Surveyor.

Because certifications and subsequently payments are processed only after the surveyor has expressed his or her satisfaction, a cargo surveyor holds a prestigious position and is held with much regard in the shipping industry. As such, marine cargo surveyors should be highly qualified and technically sound and are usually selected after thorough evaluation procedures as vessels ranging from small ferries to enormous crude oil carriers and cruise liners are approved to sail into the high seas based purely on their judgement,competence and integrity.

The greater degree of relevance of the training with latest advancements of the industry will enhance the employability opportunities. This course will benefit any professional involved in the carriage of goods by sea because it not only defines and explains the role of the cargo surveyor, but it provides the essential knowledge of cargo characteristics, stowage and securing techniques which are so central to shipping

4. JOB ROLE

Brief description of Job role:

A Cargo surveyor is normally appointed by the Cargo Owner, but he may be appointed by the cargo receivers, owners, insurers or any other stake holders in the industry. His job varies from determining the actual cargo loaded on board or to check the condition of the cargo as being loaded / discharged. He also confirms that the cargo loading is performed according to the law and is within the loadable limits. The vessel safety is also ascertained at times which includes moments involved due to cargo shift which may render the vessel unsafe during the passage.

A cargo surveyor inspects cargoes of seagoing vessels to certify compliance with national and international regulations in cargo handling and stowage. His job responsibilities include the following:

- Inspect cargo on seagoing vessels to ascertain that pertinent cargo handling regulations have been observed.
- Read vessel documents that set forth cargo loading and securing procedures, capacities, and stability factors to ascertain cargo capabilities according to design and cargo regulations.
- Calculate hold capacities, volume of stored fuel and water, weight of cargo, and ship stability factors, using standard mathematical formulas and calculator
- Measure ship holds and depth of fuel and water in tanks, and read draft markings
- Certify cargo and packaging is in compliance with health and safety regulations.
- Determine if cargo in holds can proceed to its destination.
- Inspect cargo in wharfs, freight stations..etc and assess the condition prior loading
- Check the condition of the cargo and see if proper marking & packing methods have been used
- Issue certificates of compliance for cargo that passes inspection.

- Recommend procedures to correct compliance issues.
- Ensure that cargo manifests match what's actually being shipped.
- Take photos and document findings to produce a report.
- Inspect loaded, secured cargo in holds and lashed to decks.
- Analyze data obtained from survey, formulates recommendations pertaining to vessel capacities, and writes report of findings
- Inspect cargo handling devices, such as boom, hoists, and derricks, to identify need for maintenance

5. LEARNING OUTCOMES

A. GENERIC OUTCOME

- Describe the structure of maritime industry
- Discuss the need for and different types of cargo surveys
- Evaluate the role of surveyor in various surveys , describe the role of cargo surveyors with specific cargoes
- Discuss the legal aspects of the role of the surveyor
- Write a professional report
- Explain the regulations and guidelines covering cargo stowage
- Understand cargo calculations which include solid, vapour as well as liquid quantities
- Recognize & comply with safe working practices, environment regulation and housekeeping.
- Work in a team, understand and practise soft skills, technical English to communicate with required clarity.
- Apply the general concept of basic computer, basic operating system and uses of internet services to take benefit of IT developments in the industry

B. SPECIFIC OUTCOME

- Have an understanding of the need for cargo surveys.
- Understand the role of the surveyor.
- Understand & carryout the preparations required to carry out a survey.
- Know the risks of professional negligence & understand the legal aspects of report writing.

- Know the requirements of personal safety.
- Explain how to conduct a survey.
- Understand the carriage requirements of specific cargoes
- Understand the term general cargo
- Know the general principles of stowage. Understand the importance of correct stowage&the need for segregation.Understand the issues concerning the use of dunnage
- Have knowledge of compatibility with other commodities
- Understand the issues surrounding the topic of security of cargoes.
- Have knowledge about the special requirements for refrigerated cargo
- Understand procedures for inspecting containers and cargo loaded in containers.
- Understand loading & discharging operations and carriage procedures with respect to crude oils, bulk chemicals, liquefied gases and vegetable oils
- Understand the procedures for liquid cargo surveys
- Understand the need for representative samples
- Understand the procedures for bulk solid cargo surveys / draft surveys
- Explain the common causes of cargo damage
- Describe how the changes in cargo quantity can occur and methods of detection used
- Have a knowledge of various documents which are involved in cargo operations and their functions.Understand the requirement to record facts & collect documents concerning cargo operations.

6. GENERAL INFORMATION

1.	Name of the Trade	:	**Cargo Surveyor (Port Terminals/ICS/CFS)**
2.	Duration of Apprenticeship Training	:	**15 Months**
	(i) Basic Training	:	03 Months
	(ii) Practical Training	:	12 Months
3.	Entry Qualification	:	Passed12thclass examination under 10+2 system of education or its equivalent.
4.	Selection of Apprentices	:	The apprentices will be selected as per the Apprentices Act amended time to time

5. Rebate :Trainee pass-outs from PMKVY or MES-SDI

or

Any central Government/state government approved scheme in course/trade/module relevant to the proposed optional trade.

Note:*Industry may impart training as per above time schedule, however this is not fixed. The industry may adjust the duration of training considering the fact that all the components under the syllabus must be covered. However the flexibility should be given keeping in view that no safety aspect is compromised and duration of industry training to be remains as 1 year.*

7. COURSE STRUCTURE

Training duration details: -

Time (in months)	1-3	4-15
Basic Training	**Block– I**	**-----**
Practical Training (On - job training)	**----**	**Block – II**

Components of Training	Duration of Training in Months →														
↓	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Basic Training Block - I															
Practical Training Block - II															

8. SYLLABUS

8.1 BASIC TRAINING (BLOCK – I)

DURATION: 03 MONTHS

GENERAL INFORMATION

1. Name of the Trade : **Cargo Surveyor(Port terminals/ ICS / CFS)**

2. Duration of Basic training : 03 months/500 hours

Breakup of Basic Training

a) Theory and Practical : 390 Hrs
b) Employability skills : 110 hrs.

3. Batch size : 20

4. Power Norms : 4 KW

5. Space Norms : 25 Sq. m

6. Instructor Qualification :

i) Certificate of competency as Master, issued or recognized by Government of India or

ii) Marine cargo surveyors with at least 10 years working experience

7. Tools, Equipment's & Machinery required : - As per Annexure – I

BASIC TRAINING (BLOCK – I)

Trade:**DocumentExecutive (Customs Clearance)**

8.1.1 DETAIL SYLLABUS OF PROFESSIONAL SKILLS & PROFESSIONAL KNOWLEDGE

Sl. No.	Professional Skills (Trade Practical) - 270 hrs	Professional Knowledge (Trade Theory) - 120 hrs
1.	Understanding of the Safety rules and Procedures and taking precautions in the workplace.	The safety rules and` Procedures to be observed by Cargo Surveyor
2.	Selection and use of different safety equipment's. Use PPE and Enclosed space entry procedures	The safety rules and` Procedures to be observed by Cargo Surveyor
3.	Follow healthy /safe work practices and maintain Health, Safety and Security measures While carrying out maintenance activities	Health, Safety and Security measures to be observed while carrying out the maintenance activities. Knowledge about various Hazards. Use of PPE and Enclosed space entry procedures
4.	**Introduction to Shipping** Identify various types of ships & its parts. Understand the meaning of standard terms used in shipping and Role of owners, charterers, shippers	**Introduction to Shipping** Parts of a ship, Types of ship, Meaning of general terms in shipping. Role of owners, charterers and shippers
5.	**General Principles of cargo surveying** Understanding the Purpose of cargo surveys, Surveyor's responsibilities, liabilitiesand legal implications .	**General Principles of cargo surveying** Purpose of cargo surveys Surveyor's responsibilities Surveyor's liabilities Legal aspects of report writing

6.	**Characteristics and particular issues of Non Liquid cargoes** Familiarization with different types of cargoes and their stowage & segregation requirements	**Characteristics and particular issues of Non Liquid cargoes** Different types of Non liquid cargoes – general cargo, bulk cargo, refrigerated cargo, timber cargo, containers. General principles of stowage & segregation. Compatibility between commodities. Use of tonnage. Special requirements for various types of cargoes
7.	**Characteristics and particular issues of Liquid cargoes** Carry out Loading & discharging operations. Follow carriage procedures for crude oils, bulk chemicals, liquefied gases and vegetable oils. Measure and record cargo quantities Identify the need for representative samples and organaise Conduct quantity measurement & quality control. Follow Procedures.	**Characteristics and particular issues of Liquid cargoes** Loading & discharging operations and carriage procedures with respect to crude oils, bulk chemicals, liquefied gases and vegetable oils Measurement & recording of cargo quantities Need for representative samples Procedures for quantity measurement & quality control
8.	**Contracts & Laws of carriage** Understand the legal aspects of cargo survey and follow. Carry out documentation of cargo operations. Carry out basic application of Hauge/Hauge-Visby/Hamburg &	**Contracts & Laws of carriage** Knowledge about the legal aspects of cargo survey , familiarization with cargo documentation . Basic CP terms and meaning Basic application of Hauge/Hauge-Visby/Hamburg & Rotterdam rules Legal effects of bills of lading Role of marine insurers and P&I clubs.

	Rotterdam rules Legal effects of bills of lading	Documents pertaining to cargo operations
9.	**Suitability of cargo compartments for loading** Understand General guidelines for inspection of cargo compartments. Carry out inspection of cargo compartments to assess the suitability for loading cargo. (which includes Inspect tanks for hydrocarbon cargoes – Crude Oil, Petroleum products & petro chemicals And other than hydrocarbon cargoes Inspect containers - On/off hire surveys, suitability for particular cargo. Inspect Tanktainers Cleanliness of tanktainers for edible oil. And special requirements for grain, salt, Sulphur & food stuffs)	**Suitability of cargo compartments for loading** General guidelines for inspection of cargo compartments Inspection of tanks for hydrocarbon cargoes – Crude Oil, Petroleum products & petro chemicals Inspection of tanks for cargo other than hydrocarbon cargoes inspection of Containers - On/off hire surveys, suitability for particular cargo Inspection of Tanktainers Cleaning of tank Tainers for edible oil Cargo Holds – General , Condition of the holds & special requirements for grain, salt, Sulphur & food stuffs

10.	**Sampling** Perform sampling to obtain representative samples from various types of	**Sampling** GeneralDefinitions **Sampling Liquids** – Simple tank composite sample (for a tank of uniform cross section, for a tank where the cross section alters with depth) &Multi tank composite sample **Sampling solids** – General, Sampling from Wagons or containers,Sampling from a container belt, Storage, preparation of samples (Riffle division, Coning & quartering, manual method of division)
11.	Conduct survey of cargoes to assess the condition of the cargo prior loading/ after discharge, able to identify damages and prepare a report	**Cargo Surveys** Surveying tools,Pre survey preparations, Pre-loading survey, After discharge survey, Survey In stow / break bulk, Monitor loading/ discharge, And Specific damage survey. Survey of Specific cargoes – Steel cargoes, Timber deck cargo, Grain cargoes (Grain stability calculation), Dangerous cargo Insurance (Damage) surveys – Purpose, Notice, the survey, Damage, Cause, Determining the cause , Tests for salt water, Test for taint, preparation of report

12.	**Cargo Documents** Prepare Cargo Documents (General documents, Stowage Plan, Cargo manifest, Bill of Lading, NOR, Time sheet. Letters of protest etc.)	**Cargo Documents** General documents, Stowage Plan, Cargo manifest, Bill of Lading, NOR, Time sheet. Letters of protest
13.	**Measurement surveys** Carry out measurement surveys **Draft Surveys** Conduct a draft survey **Ullage surveys** Carry out ullage surveys of liquid cargoes .	**Measurement surveys** Types of Measurement Surveys - Draft Surveys, Deadweight Surveys,Ullage surveys, Surveying the ship and Surveying the shore. **Draft Surveys:** General Remarks Reading the draft Corrections to Draft reading Establishing the mean draft Displacement – Definitions, Tables Determining the known weights- Ballast, Bunkers…etc The constant Draft check & trimming the ship Draft survey calculation sheets, Draft survey report, Certificate of weight **Deadweight Surveys** **Ullage surveys:** General and Definitions **Surveying the ship:**Determining OBQ/ROB, Wedge formula, Ullage tables Ballast Tank Tank cleanliness – Inspection & Enclosed space entry procedures,

		Vessel experience factor – Use, Calculation, Qualifying voyages and Loading. **Surveying the shore** General, Tank measurements, Water dips and Measuring temperatures – Measurement at various depths, thermometers, tests
14.	**Laboratory** Carry out testing of various parameters using lab facilities.	**Laboratory** General,Parameters tested for – Density, BS&W, Sulphur, Reid Vapour Pressure, Colour, Flash point, Cloud point, Pour point, Viscosity, Distillation, Corrosion, Octane number..etc and Determining density – Using a hydrometer, measurement.
	Calculations Carry out necessaryCalculations. Use various forms, reports, Time sheet, Load/discharge inspection check list, Pipeline capacity & admixture guide	**Calculations** General, Corrections & conversion factors, Weight in air/ Vacuum,Line clearance Forms for OBQ/ROB report, Ullage report, Shore tank quantity report, Vessel experience factor, Time sheet, Load/discharge inspection check list, Pipeline capacity & admixture guide
	Gas survey Carry out measurement survey of gas cargo	**Gas survey** General, Definitions, Survey Liquid Gas ship quantity reportand Liquid gas shore quantity report
	Revision &Internal Assessment	

BASIC TRAINING (BLOCK – I)

8.1.2 EMPLOYABILITY SKILLS

GENERAL INFORMATION

1. Name of the Trade : **Cargo Survey(Port terminals / ICS / CFS)**

2. **Name of the subject : Employability Skills**

3. Applicability : ATS- Mandatory for fresher only

4. Hours of Instruction **:** 110 Hrs.

5. Instructor Qualification :

MBA/BBA with two years' experience or graduate in sociology/social welfare/economics with two years' experience and trained in Employability skill from DGT Institute.

And

Must have studied in English/Communication Skill and Basic Computer at 12th / diploma level

OR

Existing Social Study Instructor duly trained in Employability Skill from DGT Institute.

BASIC TRAINING (BLOCK – I)

8.1.2.1 DETAIL SYLLABUS OF EMPLOYABILITY SKILLS

Topic No.	Topic	Duration (in hours)
	English Literacy	**15**
1	**Pronunciation :** Accentuation (mode of pronunciation) on simple words, Diction (use of word and speech)	
2	**Functional Grammar** Transformation of sentences, Voice change, Change of tense, Spellings.	
3	**Reading** Reading and understanding simple sentences about self, work and environment	
4	**Writing** Construction of simple sentences Writing simple English	
5	**Speaking / Spoken English** Speaking with preparation on self, on family, on friends/ classmates, on know, picture reading gain confidence through role-playing and discussions on current happening job description, asking about someone's job habitual actions. Cardinal (fundamental) numbers ordinal numbers. Taking messages, passing messages on and filling in message forms Greeting and introductions office hospitality, Resumes or curriculum vita essential parts, letters of application reference to previous communication.	
	I.T. Literacy	**15**
1	**Basics of Computer** Introduction, Computer and its applications, Hardware and peripherals, Switching on-Starting and shutting down of computer.	
2	**Computer Operating System** Basics of Operating System, WINDOWS, The user interface of Windows OS, Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc., Use of Common applications.	
3	**Word processing and Worksheet** Basic operating of Word Processing, Creating, opening and closing Documents, use of shortcuts, Creating and Editing of Text, Formatting	

	the Text, Insertion & creation of Tables. Printing document. Basics of Excel worksheet, understanding basic commands, creating simple worksheets, understanding sample worksheets, use of simple formulas and functions, Printing of simple excel sheets	
4.	**Computer Networking and INTERNET** Basic of computer Networks (using real life examples), Definitions of Local Area Network (LAN), Wide Area Network (WAN), Internet, Concept of Internet (Network of Networks), Meaning of World Wide Web (WWW), Web Browser, Web Site, Web page and Search Engines. Accessing the Internet using Web Browser, Downloading and Printing Web Pages, Opening an email account and use of email. Social media sites and its implication. Information Security and antivirus tools, Do's and Don'ts in Information Security, Awareness of IT - ACT, types of cyber-crimes.	
	Communication Skill	**25**
1	**Introduction to Communication Skills** Communication and its importance Principles of Effective communication Types of communication - verbal, non-verbal, written, email, talking on phone. Nonverbal communication -characteristics, components-Para-language Body - language Barriers to communication and dealing with barriers. Handling nervousness/ discomfort. Case study/Exercise	
2	**Listening Skills** Listening-hearing and listening, effective listening, barriers to effective listening guidelines for effective listening. Triple- A Listening - Attitude, Attention & Adjustment. Active Listening Skills.	
3	**Motivational Training** Characteristics Essential to Achieving Success The Power of Positive Attitude Self-awareness Importance of Commitment Ethics and Values Ways to Motivate Oneself Personal Goal setting and Employability Planning. Case study/Exercise	

4	**Facing Interviews** Manners, Etiquettes, Dress code for an interview Do's & Don'ts for an interview	
5	**Behavioral Skills** **Organizational Behavior** Problem Solving Confidence Building Attitude Decision making Case study/Exercise	
	Entrepreneurship skill	**15**
1	**Concept of Entrepreneurship** **Entrepreneurship**- Entrepreneurship - Enterprises:-Conceptual issue Entrepreneurship vs. Management, Entrepreneurial motivation. Performance & Record, Role & Function of entrepreneurs in relation to the enterprise & relation to the economy, Source of business ideas, Entrepreneurial opportunities, The process of setting up a business.	
2	**Project Preparation & Marketing analysis** Qualities of a good Entrepreneur, SWOT and Risk Analysis. Concept & application of Product Life Cycle (PLC), Sales & distribution Management. Different Between Small Scale & Large Scale Business, Market Survey, Method of marketing, Publicity and advertisement, Marketing Mix.	
3	**Institutions Support** Preparation of Project. Role of Various Schemes and Institutes for self-employment i.e. DIC, SIDA, SISI, NSIC, SIDO, Idea for financing/ non financing support agencies to familiarizes with the Policies /Programs& procedure & the available scheme.	
4	**Investment Procurement** Project formation, Feasibility, Legal formalities i.e., Shop Act, Estimation & Costing, Investment procedure - Loan procurement - Banking Processes.	
	Productivity	**10**
1	**Productivity** Definition, Necessity, Meaning of GDP.	
2	**Affecting Factors** Skills, Working Aids, Automation, Environment, Motivation How improves or slows down.	
3	**Comparison with developed countries** Comparative productivity in developed countries (viz. Germany, Japan	

	and Australia) in selected industries e.g. Manufacturing, Steel, Mining, Construction etc. Living standards of those countries, wages.	
4	**Personal Finance Management** Banking processes, Handling ATM, KYC registration, safe cash handling, Personal risk and Insurance.	
	Occupational Safety, Health & Environment Education	**15**
1	**Safety & Health** Introduction to Occupational Safety and Health importance of safety and health at workplace.	
2	**Occupational Hazards** Basic Hazards, Chemical Hazards, Vibro-acoustic Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards. Occupational health, Occupational hygienic, Occupational Diseases/ Disorders & its prevention.	
3	**Accident & safety** Basic principles for protective equipment. Accident Prevention techniques - control of accidents and safety measures.	
4	**First Aid** Care of injured & Sick at the workplaces, First-Aid & Transportation of sick person	
5	**Basic Provisions** Idea of basic provision of safety, health, welfare under legislation of India.	
6	**Ecosystem** Introduction to Environment. Relationship between Society and Environment, Ecosystem and Factors causing imbalance.	
7	**Pollution** Pollution and pollutants including liquid, gaseous, solid and hazardous waste.	
8	**Energy Conservation** Conservation of Energy, re-use and recycle.	
9	**Global warming** Global warming, climate change and Ozone layer depletion.	
10	**Ground Water** Hydrological cycle, ground and surface water, Conservation and Harvesting of water	
11	**Environment** Right attitude towards environment, Maintenance of in -house environment	

	Labour Welfare Legislation	**5**
1	**Welfare Acts** Benefits guaranteed under various acts- Factories Act, Apprenticeship Act, Employees State Insurance Act (ESI), Payment Wages Act, Employees Provident Fund Act, The Workmen's compensation Act.	
	Quality Tools	**10**
1	**Quality Consciousness :** Meaning of quality, Quality Characteristic	
2	**Quality Circles :** Definition, Advantage of small group activity, objectives of quality Circle, Roles and function of Quality Circles in Organization, Operation of Quality circle. Approaches to starting Quality Circles, Steps for continuation Quality Circles.	
3	**Quality Management System :** Idea of ISO 9000 and BIS systems and its importance in maintaining qualities.	
4	**House Keeping :** Purpose of Housekeeping, Practice of good Housekeeping.	
5	**Quality Tools** Basic quality tools with a few examples	

8.2 PRACTICAL TRAINING (ON-JOB TRAINING)

GENERAL INFORMATION

1	Name of the Trade	:	**Cargo Surveyor (Port terminals / ICS / CFS)**
2	Duration of On-Job Training	:	12 months
3.	Instructor Qualification	:	Marine Cargo surveyors with at least 5 years working experience
4	Infrastructure for On-Job Training	:	As per Annexure – II

8.2.1 BROAD SKILL COMPONENT TO BE COVERED DURING ON-JOB TRAINING

(Detail Syllabus for Practical Training / ON - JOB TRAINING)

Duration: (12 months)

- Familiarization with the shipping industry.
- Health, Safety & Environment: Introduction to safety Equipments and their uses. Use of Personal protective Equipments (PPE).
- Develop good appearance and behavior, practice, tasks as per industry standard and express good communication skill.
- Explain the need for cargo surveys and the role of cargo surveyors in shipping.
- Visit various types of ships and identify various parts / structures including cargo compartments, ballast tanks, cargo gears & familiarize with other general equipments
- Read vessel documents that set forth cargo loading and securing procedures, capacities, and stability factors to ascertain cargo capabilities according to design and cargo regulations
- Measure ship holds and depth of fuel and water in tanks, using sounding line and tape measure and read draft markings
- Calculate hold capacities, volume of stored fuel and water, weight of cargo, and ship stability factors, using standard mathematical formulas and calculator
- Identify different types of cargoes transported through ships
- Understand the uses and limitations of each type of Stowage & segregation requirements
- Understand the issues concerning dunnage
- Read and understand the contents of various documents involved in cargo operations
- Visit wharfs & terminals to inspect the cargoes and assess the condition
- Check whether goods are in good conditions before packing in containers.

- Inspect containers prior loading on vessels. Familiarise with the requirements of special containers like reefer containers
- Understand handling requirements of dangerous goods, their packing, labelling and stowage requirements.
- Visit ships & terminals and monitor loading & unloading operations.
- Participate in inspection of cargo compartments to assess suitability for loadingFamiliarise with the hold cleaning requirements for various types of cargoes.
- Perform draft survey calculations on a bulk carrier and calculate the cargo quantity. Familiarise with the use of ship's stability booklets and tank tables
- Monitor grain loading operations and perform grain calculations
- Understand the cargo operations involving liquid cargo.
- Inspection of cargo compartments to assess the suitability for loading oil & chemical cargoes.
- Familiarise with the requirements for enclosed space entry procedures
- Carry out tank inspection on tankers prior loading / after discharge and perform OBQ/ROB calculations
- Carry out ullage survey for liquid cargoes
- Take samples of various types of cargoes
- Prepare survey reports

9. ASSESSMENT STANDARD

9.1 Assessment Guideline:

Appropriate arrangements should be made to ensure that there will be no artificial barriers to assessment. The nature of special needs should be taken into account while undertaking assessment. Due consideration to be given while assessing for team work, avoidance/reduction of scrape/wastage and disposal of scarp/wastage as per procedure, behavioral attitude and regularity in training.

The following marking pattern to be adopted while assessing:

a) Weightage in the range of 60-75% to be allotted during assessment under following performance level:

For this grade, the candidate with occasional guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of an acceptable standard of craftsmanship.

In this work there is evidence of:

- Good skill levels in the use of hand tools, machine tools and workshop equipment
- Many tolerances while undertaking different work are in line with those demanded by the component/job.
- A fairly good level of neatness and consistency in the finish
- Occasional support in completing the project/job.

b) Weightage in the range of above75%- 90% to be allotted during assessment under following performance level:

For this grade, the candidate, with little guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of a reasonable standard of craftsmanship.

In this work there is evidence of:

- good skill levels in the use of hand tools, machine tools and workshop equipment
- The majority of tolerances while undertaking different work are in line with those demanded by the component/job.
- a good level of neatness and consistency in the finish
- little support in completing the project/job

c) Weightage in the range of above 90% to be allotted during assessment under following performance level:

For performance in this grade, the candidate, with minimal or no support in organization and execution and with due regard for safety procedures and practices, has produced work which demonstrates attainment of a high standard of craftsmanship.

In this work there is evidence of:

- High skill levels in the use of hand tools, machine tools and workshop equipment
- Tolerances while undertaking different work being substantially in line with those demanded by the component/job.
- A high level of neatness and consistency in the finish.
- Minimal or no support in completing the project

10.FURTHER LEARNING PATHWAYS

After gaining adequate work experience in cargo surveying candidates may opt for training to advance their career into the following fields

1. P&I Surveyor
2. Hull & Machinery Surveyor
3. Classification society surveyor

ANNEXURE – I

TOOLS &EQUIPMENTS FOR BASIC TRAINING

INFRASTRUCTURE FOR PROFESSIONAL SKILL & PROFESSIONAL KNOWLEDGE

TRADE:CARGO SURVEYOR (Port terminals/ICS/CFS)

TRAINEES TOOL KIT:-

Sl. No.	Name of the items	Quantity (indicative)
1.	Safety Shoes	20 pairs
2.	Safety Helmet	20
3.	Gloves	20 pairs
4.	Boiler suits	20
5.	Ear Plugs	20 pairs
6.	Industrial Goggles	20
7.	Safety Norms Handbook	20
8.	Material Safety Data Sheets of different cargoes	20
9.	DO's and Don'ts Sheet	20

Note: *In case of basic training the BTP may hire the Material Handling Equipments if required except if the BTP is the manufacturer of the equipment. Tools, equipment and machinery available in the industry may be used for imparting basic training if the BTP is setup by the Industry*

ANNEXURE – II

INFRASTRUCTURE FOR ON-JOB TRAINING

TRADE: CARGO SURVEYOR (Port terminals/ICS/CFS)

Actual training will depend on the existing facilities available in the establishments. However, the industry should ensure that the broad skills defined against On-Job Training part (i.e. 12 months) are imparted. In case of any shortfall, the concerned industry may impart the training in any other industry to cover up the shortfall.

ANNEXURE-III

GUIDELINES FOR INSTRUCTORS AND PAPER SETTERS

1. Due care to be taken for proper & inclusive delivery among the batch. Some of the following method of delivery may be adopted:

   A) LECTURE

   B) LESSON

   C) DEMONSTRATION

   D) PRACTICE

   E) GROUP DISCUSSION

   F) DISCUSSION WITH PEER GROUP

   G) PROJECT WORK

   H) INDUSTRIAL VISIT

2. Maximum utilization of latest form of training viz., audio visual aids, integration of IT, etc. may be adopted.

3. The total hours to be devoted against each topic may be decided with due diligence to safety & with prioritizing transfer of required skills.

ANNEXURE - IV

List of Basic Training providers recommended by LSC		
S.No	**Name of Basic Training Providers**	**Location**
1	Allcargo Logistics Limited	Tamil Nadu/Maharashtra
2	Alliance Institute of Advanced Pharmaceutical and Health Sciences	Telangana/Andhra Pradesh
3	Artem institute of logistics and transports	Tamil Nadu
4	Confederation of indian industry(CII) Institute of Logistics	PAN India
5	Daksya Academy Pvt Ltd	PAN India
6	Darcl Parable	Haryana
7	De Unique Educational Society (Softdot Institute)	PAN India
8	Degain Group	Maharashtra
9	Express Industry Council of India	PAN India
10	Green Earth Logistics Pvt. Ltd.	Tamil Nadu
11	INNOVISION LIMITED	PAN India
12	JBS Academy Pvt Ltd.	Gujarat
13	Nidan Technologies Private Limited	Maharashtra/Madhya Pradesh
14	People XL(Jobs connect hr solutions Pvt. Ltd)	South India
15	Premier Center for Competency Training	Tamil Nadu
16	Safeducate Learning Pvt. Ltd.	PAN India
17	Shri Technologies	PAN India
18	ST.BRITTO'S COLLEGE	Tamil Nadu
19	SynchroServe Global Solutions Private Limited	Telangana/Andhra Pradesh
20	Telangana Jagruthi	Telangana
21	TVS Training & Services Private Limited	Tamil Nadu
22	UPDATER SERVICES PVT LTD	South India

ANNEXURE - V

List of Assessment Agency for basic training recommended by LSC		
SL.NO.	**Name of Assessment Agency**	**Location**
1	Hemsen EXIM LLP	PAN India
2	Eduworld Consultants Pvt. Ltd,	
3	CII (Confederation of Indian Industry)	
4	Induslynk Training Services Private Limited (Mettl)	
5	Manipal City & Guilds Pvt Ltd	
6	GreenArrows Safety Management (P) Ltd	
7	I-Vintage solutions Pvt. Ltd.	
8	CoCubes Technologies Pvt Ltd	
9	Samhit Assessments & research foundation	
10	Formac Software Services	
11	Unison Academy	
12	Prima Competencies Pvt. Ltd	
13	Brisk Mind Pvt Ltd	
14	Edu Vantage Pvt. Ltd.	
15	Lead Assessment	
16	C & K Management Limited	
17	Krish Networks	
18	Society for education and Environmental training	
19	D'Pariksha	
20	Anagha Solutions	
21	Ashvi Consulting	
22	Shri Guru Hargovind Society	