INDIAN SEAFARING OFFICERS

Compensation and Benefits Survey 2014

A joint initiative of **FOSMA** *and* **MAASA**

Survey Conducted and Report Developed and Published by

Knowledge-Humility-Excellence

ISF Institute of Research and Education (IIRE)

A division of **Inner Search Foundation**

A charitable trust established in 2000 under the Bombay Charitable Trust Act 1950.

FOSMA

Foreign Owners Representatives and Ship Managers Association (FOSMA) is the pioneer Association of Foreign Ship-owners Representatives, Foreign Ship Managers, and Ship Manning Agents in India. Established in 1989, FOSMA has today risen to its present eminent position comprising thirty two member companies representing majority of Indian Seafarers working on foreign flag vessels.

FOSMA is actively involved in representing the views of the industry, and working along with the maritime administration of India in matters relating to Recruitment and Placement of Seafarers, Merchant Shipping, Maritime Education and Training, Assessment, Examination and Certification Matters, Maritime Labour Conventions, STCW matters, etc.

FOSMA has also established and operate its own maritime training institutes for the general benefit of all seafarers at Kolkata, Delhi, Haldia and Mumbai, with a spread of course offerings from Pre-Sea to Master / Chief Engineer levels.

MASSA

The **Maritime Association of Ship Owners Ship Managers and Agents (MASSA)** is a non-profit making body of Ship owners, Ship managers and their Agents, registered as a Section 25 company, under the Companies Act, 1956 and based in Mumbai. Members are all Registered RPS companies which have a long association with Indian Manning and are identified as traditional employers of Indian Officers and Ratings.

MASSA enjoys an excellent rapport and working relationship with the Ministry of Shipping & Director General of Shipping, Government of India, as well as other stakeholders in the Industry. MASSA is represented in various statutory bodies in the Shipping industry.

MASSA is the Secretariat of the National Maritime Board (India)

MASSA has established 2 training institutes, namely MASSA Maritime Academy (MMA) at CBD Belapur and MASSA Maritime Academy (MMA) at Chennai, which conduct post sea competency courses as well as STCW Modular courses, both Institutes being DG Approved.

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ISF Institute of Education and Research (IIRE), is a division of **Inner Search Foundation**, a public charitable trust established in 2000 under the Bombay Charitable Trust Act 1950. The trust and other associated business entities operate under the umbrella of the ISF Group (www.isfgroup.in).

IIRE has been established to facilitate education and research in diverse fields of natural science, earth science, technology, management, life science, holistic health, human sciences, and social sciences, formal and applied sciences.

The aim of IIRE is also to create integrated educational and research programmes which enhance the capability, productivity and employment potential of individuals in their respective fields.

The following members of IIRE have been involved in the survey, statistical analysis and authoring the **"ISF Seafaring Officers Wages Benchmarking Report – 2014".**

- **Poonam Kapoor** has a Masters degree in Economics and a doctorate in International Economics on **"International Trade in Services with special focus on Maritime Trade"** from the Mumbai University. She also holds a PGDM in Counselling and has undergone formal training as a Yoga Teacher.

- **Pawan Kapoor** is the founder and trustee of the Inner Search Foundation and heads the maritime services company which is a part of the group. He is a marine engineer, with career spanning 34 years, during which he has sailed for 10 years and has worked ashore in the maritime education sector for 24 years. With over 12 years' experience in developing and managing training organizations, he has used his experience in writing several project/feasibility reports for institutes in India.

Wages Benchmarking: the journey so far……

It was in the year 2009 that **FOSMA** took the initiative of benchmarking the Indian seafarers' compensation and benefits as an industry exercise. This initiative of **FOSMA** to ask **ISF HR Services** to carry out the Wages Benchmarking of Indian seafarers is not only noteworthy but also an expression of the faith of the participating companies in this exercise by sharing their data for the overall benefit and common good of the industry. An exercise of this nature involves collection of extensive amount of primary data, processing it, analyzing it and deriving purposeful conclusions. The final report provides a robust mechanism for the participating members for benchmarking themselves with the industry figures.

The report contents, analysis and the quality has matured over the years by way of inputs from the **FOSMA** members and the efforts of **ISF Research Team**, resulting in a sustained activity over a five year period 2009-2013.

It was in the year 2014 that this activity received a big boost with **MASSA** joining in and making this exercise that much more significant. With participation of both **MASSA** and **FOSMA** members, the report now covers a significant portion of the onboard positions of Indians on foreign flag vessels, thereby making the contents of the report closer to, and better in line with, the industry representations.

ISF on its part has now moved this activity to its **ISF Institute of Research and Education (IIRE),** a division of **Inner Search Foundation**, a charitable public trust, thereby lending more credibility and strength to this activity.

Going forward, **IIRE,** with active participation from **FOSMA** and **MASSA**, and perhaps other industry associations, will continue to strive to ensure that the exercise in the ongoing years will not only be able to meet the increased expectations of the industry participants but also be able to establish itself as a singular point of reference for active business decision making for ongoing as well as potential commercial ventures.

Poonam Kapoor Ph.D. **Pawan Kapoor**

Participating Companies

The following companies have participated in 2014 benchmarking exercise:

1. Adani Shipping India Pvt. Ltd.
2. Andromeda Shipping (India) Pvt. Ltd.
3. B W Maritime Pte. Ltd.
4. Chellaram Shipping Pvt. Ltd.
5. Confidence Shipping Co. Pvt. Ltd.
6. Dockendale Ship Management (India) Pvt. Ltd.
7. Dynacom Tankers Management Ltd.
8. Elegant Marine Services Pvt. Ltd.
9. ELITE Mariners Pvt. Ltd.
10. Genoa Maritime (Cyprus) Ltd.
11. Gulf Energy Maritime Services Pvt. Ltd.
12. Herald Maritime Services Pvt. Ltd.
13. IMS Ship Management Pvt. Ltd.
14. K Line Ship Management Co. Ltd. (KLSM)
15. K Steamship Agencies Pvt. Ltd.
16. Maersk Line India Pvt. Ltd.
17. Mitsui O. S. K. Lines Maritime (India) Pvt. Ltd.
18. MMS Maritime (India) Pvt. Ltd.
19. Nortrans Maritime Services.
20. Orient Ship Management & Manning Pvt. Ltd.
21. Pacific Manning Agency.
22. Scorpio Marine Management (India) Pvt. Ltd.
23. Sea Team Management (India) Pvt. Ltd.
24. Seaspan Crew Management India Pvt. Ltd.
25. Selandia Crew Management (India) Pvt. Ltd.
26. Target Ship Management India (P). Ltd.
27. Univan Ship Management India Pvt. Ltd.
28. V. Ships India Pvt. Ltd.
29. VR Maritime Services Pvt. Ltd.
30. Wallem Shipmanagement (India) Pvt. Ltd.
31. Wilhelmsen Ship Management (India) Pvt. Ltd.
32. World Tankers Management Pte. Ltd.

Abbreviations Used

1. Avg. YoY Growth – Average Year on Year Growth
2. FSO - Floating Storage and Offloading unit
3. LNG – Liquefied Natural Gas
4. LPG – Liquefied Petroleum Gas
5. Max – Highest value in a set of data
6. Min – lowest value in a set of data
7. P10 – 10th percentile in the set of data
8. P25 – 25th percentile in the set of data
9. P75 - 75th percentile in the set of data
10. P90 – 90th percentile in the set of data
11. PCC – Pure Car Carrier
12. RORO – Roll-on/roll-off ship
13. SD – Standard Deviation
14. USD – United States Dollars

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About the Report

1.1. Aim of the study

The aim of this study is to provide empirical evidence for supporting decision making by ship owners, managers and manning agencies while budgeting crew costs and for taking informed decisions pertaining to existing Indian manpower for their sustained marketability.

This study has been structured and executed in a manner fully compliant with the provision of the (Indian) Competition Act 2002 and the associated regulations. The Indian Competition Act 2002 prohibits exchange of information between competitors which may directly or indirectly lead to the fixing of prices, limiting of production/supply, market/customer allocation or manipulate a bidding process. The Indian Competition Law regulator, the Competition Commission of India has on several occasions imposed penalties on companies for indulging in exchange of commercially sensitive information or coordinated business conduct.

The data collection process adopted by IIRE ensures that no such sensitive information which may allow companies to indulge in unfair competitive practices is ever shared among the survey participants. Individual company data is kept secretly confidential and no company receives any confidential information of their competitors.

The final analysis is in the form of statistical representation as displayed in following chapters which shows the relative position of the company with respect to its peers. This information gives the participant companies an indication about their standing in the industry and does not allow them to gain access to any commercially sensitive information of any other company.

All participating companies have entered into a Non- Disclosure Agreement IIRE to ensure compliance with the regulatory framework mentioned above.

1.2. Methodology

- Being aware of the fact that the data shared by the participating companies is of sensitive nature and may be misused, IIRE paid complete attention to maintain confidentiality through the entire process of data collection and processing.

- The data collected for this report is older than three months and hence it is not commercially sensitive.

- The benchmarking exercise is limited to ranking each member company according to the wages paid to their seafaring officers and does not give the member companies any indication of the ranking of their competitors.

IIRE adopted the following methodology during collection, data feeding, analysis and reporting:

- Interview/Survey Form was designed by IIRE in close conjunction with the appointed technical committee.
- Finalized Interview/Survey Forms was sent to all the participating companies through e mail.
- Data Collection Process was carried out by receiving individual company data through emails. Complete confidentiality with regards to data of each company was maintained.
- Interview/Verification of the data received from companies was carried out by solely by Mr. Pawan Kapoor – Trustee of IIRE. This included checking a few employment contracts at random. No names of the companies appeared in any formal document. Each company on completion of the data collection was assigned a code which was passed on to the team involved in data entry.
- Data sorting out, construction of tables in spread sheets, developing graphs, applying statistical tools for arriving at key results was then carried out.
- In instances where the category of types of vessel was too small to be able to conceal the identity of the participants, the data set was expanded and shown as a range.
- The results of the Survey are aggregated and the participants cannot discern identity of the other data providers.

1.3. Target population covered during survey

This study has been carried out on Indian deck and engineering officers on board ships of foreign companies having manning, management or liaison offices in India. The total number of Indian officer onboard positions covered in this survey is **11611** from **32** companies.

The breakup of participating companies in various categories is given in below table. Category 1 companies are those which have less than 200 officer positions onboard, Category 2 are between 200-500 officer positions on board and Category 3 are those with more than 500 officer positions onboard.

Company Type	**Category 1**	**Category 2**	**Category 3**	**Total**
	Less than 200 officers onboard	Between 200 to 500 officers on board	500 plus officers on board	
Ship Owning Companies	6	2	2	10
Ship Management Companies	5	1	5	11
Recruiting Agencies	7	1	3	11
				32

2. Wages Benchmarking – 2014

This section presents the analysis of 2014 wages for the seafarers derived from the data shared by the participating companies. The outcomes have been presented in form of tables for various ship types as well as each rank under different ship types. The tables display statistical analysis like Mean, Median, Percentiles and Standard Deviations etc. for each rank for efficient decision making. A brief explanation of the various statistical tools used has been included in the appendices.

A separate section covers the analysis of wages paid to Trainees and Junior Officers/Engineers.

2.1. Oil Tankers

Total respondents: 22 companies (68.75 %). However the actual number of sea faring officers could not be determined from the data made available.

Master									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	10400	10500	10940	11977	11745	12500	12701	13000	873
Final Year Wages	12700	13050	13402	13733	13826	14275	14755	15422	695

Chief Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	10300	10450	10825	11780	11589	12275	12526	12900	851
Final Year Wages	12500	13060	13287	13500	13675	14055	14474	15122	638

Chief Officer / Second Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	8000	8244	8525	9250	9065	9450	9750	10340	591
Final Year Wages	9450	9708	9937	10400	10409	10675	11301	12101	672

Second Officer / Third Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	3940	4000	4300	4500	4491	4700	4896	5000	303
Final Year Wages	4165	4500	4713	4900	4940	5184	5500	5520	371

Electrical Officer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	3000	3620	4448	4669	4521	4863	5020	5444	573
Final Year Wages	4000	4825	5135	5321	5337	5500	5915	6660	504

Third Officer / Fourth Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	2300	2700	2850	3522	3355	3713	3975	4421	540
Final Year Wages	3000	3120	3625	3800	3793	3975	4434	4620	429

2.2. Chemical Tankers

Total respondents: 15 companies (46.87%). However the actual number of sea faring officers could not be determined from the data made available

Master									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	10500	10500	10750	11649	11619	12505	12675	12966	907
Final Year Wages	11000	13279	13648	13950	13932	14413	14912	15522	1004

Chief Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	10470	10500	10500	11500	11448	12331	12440	12666	841
Final Year Wages	11000	13144	13500	13800	13785	14300	14624	15222	938

Chief Officer / Second Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	8000	8320	8630	9345	9143	9600	9940	10340	701
Final Year Wages	9800	9930	10000	10400	10516	10600	11697	12101	704

Second Officer / Third Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	3995	4000	4200	4425	4444	4669	4860	5000	316
Final Year Wages	4500	4598	4725	4900	4982	5200	5440	5576	342

Electrical Officer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	3000	3420	3900	4500	4370	4825	5080	5444	706
Final Year Wages	3500	5001	5200	5400	5431	5700	6240	6660	702

Third Officer / Fourth Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	2200	2700	2800	3023	3207	3625	3910	4150	547
Final Year Wages	2800	3000	3523	3750	3715	4050	4383	4500	500

2.3. LPG

Total respondents: 11 companies (34.37%). However the actual number of sea faring officers could not be determined from the data made available.

Master									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	10500	10600	11050	11954	11732	12323	12486	12812	802
Final Year Wages	12000	13000	13541	14000	14002	14350	15485	15607	1040

Chief Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	10500	10860	11125	11890	11683	12175	12351	12512	681
Final Year Wages	12000	12720	13051	13899	13780	14283	15114	15185	1012

Chief Officer / Second Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	8000	8630	9331	9435	9282	9583	9705	9750	537
Final Year Wages	10083	10098	10213	10525	10559	10744	11140	11313	418

Second Officer / Third Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	3950	3995	4500	4556	4543	4734	4935	4998	346
Final Year Wages	4165	4467	4748	5072	4995	5351	5504	5540	450

Electrical Officer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	3000	3160	4600	4745	4451	5000	5053	5063	787
Final Year Wages	3570	4714	5150	5321	5263	5650	5926	6028	723

Third Officer / Fourth Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	2400	2670	3039	3747	3467	3892	3956	4050	587
Final Year Wages	3000	3000	3164	3907	3738	4188	4272	4405	554

2.4. LNG

Total respondents: 5 companies (15.62%). However the actual number of sea faring officers could not be determined from the data made available.

Master									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	10600	12060	14250	14645	14503	15519	16708	17500	2517
Final Year Wages	14000	14608	15519	16194	16821	18500	19334	19890	2360

Chief Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	13833	13900	14000	14342	14848	15066	16226	17000	1293
Final Year Wages	15066	15417	15944	16606	17020	17900	18910	19584	1767

Chief Officer / Second Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	10750	10838	10969	11424	11335	11492	11821	12040	501
Final Year Wages	11492	11757	12154	12621	12767	12940	13952	14626	1174

Second Officer / Third Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	4745	4927	5200	5240	5264	5459	5590	5677	347
Final Year Wages	5143	5302	5540	5677	5738	5884	6222	6448	480

Electrical Officer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	4745	5145	5744	6559	6276	7091	7181	7242	1140
Final Year Wages	6028	6372	6889	7209	6947	7267	7311	7340	616

Third Officer / Fourth Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	3457	3690	4040	4100	4067	4182	4407	4557	396
Final Year Wages	3656	3890	4240	4557	4340	4613	4626	4635	414

2.5. Bulk Carriers / Self Unloaders

Total respondents: 22 companies (68.75%). However the actual number of sea faring officers could not be determined from the data made available.

Master									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	8000	8002	8275	8700	8767	9000	9815	10600	683
Final Year Wages	9200	9286	9600	9720	10180	10100	11974	14000	1257

Chief Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	7950	7989	8125	8410	8542	8800	9000	10000	517
Final Year Wages	8900	9152	9425	9550	9733	9750	10364	12595	738

Chief Officer / Second Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	6405	6730	6775	7300	7202	7500	7622	8800	541
Final Year Wages	7235	7400	7523	7800	7899	7972	8466	9500	590

Second Officer / Third Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	2511	3560	3800	3850	3925	4165	4340	4803	429
Final Year Wages	3500	3920	4100	4200	4266	4325	4702	5479	397

Electrical Officer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	2500	2682	3320	4000	3886	4382	4650	5300	766
Final Year Wages	3200	4233	4611	4700	4731	4998	5200	5900	612

Third Officer / Fourth Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	2185	2416	2675	3000	2985	3263	3590	4000	498
Final Year Wages	2500	2755	3031	3400	3318	3550	3797	4198	447

2.6. Ro Ro / PCCs

Total respondents: 7 companies (21.87%). However the actual number of sea faring officers could not be determined from the data made available.

Master									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	7830	7889	7964	8150	8116	8214	8356	8475	219
Final Year Wages	8925	8928	9140	9350	9423	9754	9844	9900	399

Chief Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	7600	7746	7897	8000	7989	8089	8200	8350	233
Final Year Wages	8700	8709	8933	9300	9275	9654	9720	9750	443

Chief Officer / Second Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	6190	6436	6675	6820	6903	7176	7545	7610	499
Final Year Wages	6715	7055	7341	7500	7483	7720	7982	8045	440

Second Officer / Third Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	3800	3800	3800	3840	3909	3920	4114	4285	180
Final Year Wages	4040	4055	4133	4200	4262	4370	4560	4590	218

Electrical Officer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	2647	2647	2735	3501	3492	4015	4327	4634	838
Final Year Wages	4337	4454	4603	4700	4747	4904	5086	5200	303

Third Officer / Fourth Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	2500	2590	2675	2700	2874	3110	3272	3349	319
Final Year Wages	2750	2780	3100	3400	3362	3664	3826	3854	439

2.7. Container Vessels

Total respondents: 12 companies (37.50%) in case of the top four ranks. However the actual number of sea faring officers could not be determined from the data made available.

Master									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	7830	7971	8000	8150	8339	8720	8970	9087	441
Final Year Wages	8930	9029	9200	9750	9748	10175	10426	10800	593

Chief Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	7600	7836	7950	8050	8223	8575	8822	8850	416
Final Year Wages	8700	8792	9150	9625	9550	9953	10264	10650	601

Chief Officer / Second Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	6190	6460	6750	6878	7022	7300	7721	7820	503
Final Year Wages	6715	7304	7400	7563	7770	8135	8618	9020	626

Second Officer / Third Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	3500	3800	3800	3860	3973	4148	4296	4345	251
Final Year Wages	3900	4020	4078	4200	4293	4555	4667	4885	296

Electrical Officer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	2647	2753	3640	4010	3876	4300	4694	4800	704
Final Year Wages	4367	4579	4700	4880	4949	5188	5410	5860	403

Third Officer / Fourth Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	2500	2615	2700	3000	3086	3488	3637	3900	456
Final Year Wages	2750	2840	3400	3550	3477	3807	3962	4121	423

2.8. FSO / FPSO

There were only two sets of data available for this category. Hence the figures cannot be given out in view of maintaining confidentiality of participants. The tables of statistical figures could not be created as it is not possible to generate valid conclusions with minimal data.

The average wages in this category are as below:

- Master USD 12160.
- Chief Engineer USD 12110.
- Chief Officer and Second Engineer USD 9481.
- Second Officer and Third Engineer USD 6560.
- Electrical Officer USD 5010.

2.9. Off Shore Vessels

There was only one set of data available for this category. Hence the figures cannot be given out in view of maintaining confidentiality. The tables of statistical figures could not be created as it is not possible to generate valid conclusions with minimal data.

The range in which wages are offered to various ranks are:

- Master USD 15000 – 18000.
- Chief Engineer USD 11500 - 14000.
- Chief Officer and Second Engineer USD 10000 - 12000.
- Second Officer and Third Engineer USD 5000-7000.
- Electrical Officer USD 5000-7500.
- Third Officer and Fourth Engineer USD 4500-5500

2.10. Cadets, Trainee Engineers, Junior Officers and Engineers

Deck Cadet (DNS)									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	265	300	363	500	473	505	622	858	155
Final Year Wages	295	335	412	502	509	600	692	858	156

Deck Cadet (BSc)									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	300	320	375	500	482	535	620	800	136
Final Year Wages	300	350	450	504	513	600	638	800	131

Deck Cadet/ Junior Officer (2nd Mate Holder)									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	500	555	1225	1500	1525	2052	2356	2500	685
Final Year Wages	450	500	781	1500	1431	1968	2340	2500	745

Trainer Marine Engineer (Not holding Part A or B)									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	350	428	500	504	575	550	720	1287	233
Final Year Wages	350	428	500	620	630	700	750	1287	234

Junior Engineer (Class IV Part A Holder)									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	500	502	551	625	982	900	2340	2849	806
Final Year Wages	500	506	590	635	977	788	2340	2849	804

Junior Engineer (Class IV Part B Holder)									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
First Year Wages	500	555	750	1400	1278	1575	1744	2340	583
Final Year Wages	500	549	600	1500	1231	1650	1810	2340	648

Note: Except two respondents who offer different wages for different types of vessels, the wages of cadets, trainee and junior engineers are same across for all vessel types. For the purpose of analysis, higher wages have been included from the two respondents.

3. Additional Benefits for Seafarers - The Industry Trends

Ship Owners and Managers have over the years, evolved suitable mechanisms to offer incentives to seafarers for retaining them and also for attracting them to join their fleet. Such measures are more prominent during the periods of shortage of suitable ranks.

This section deals with a broad analysis of the various heads, in addition to those that fall under the standard wages like Basic, fixed Over Time, Leave wages, etc.

The data analysis has been presented in tables for each rank. The tables display the percentage of companies offering the particular benefit. It also shows the amount of benefits offered. Additional remarks have been made for better understanding and utility.

A separate analysis of "Rejoining Bonus" has been carried out in this section at the end of the general study of various heads.

3.1. Master/Chief Engineer

S.N.	Benefit Head	%age Respondents offering the Benefit	Quantum/Range of Benefit in USD terms	Remarks
1	**Standby Wages**	56	USD 0-3500	The range of standby wages varies in the industry - Some companies pay up to two months basic, while some 100% basic for 30 days, and some give 50% basic for up to 15 days.
2	**Hardship Allowance**	9	USD 200-300	Paid per month for ships more than 13-15 years of age. One particular respondent is offering upto USD 2000 for specialized Vessels.
3	**Family Carriage, Air Travel, Travel Insurance on company account**	62	On actual	The limit on the travel expenditure varies from company to company. Some have a cap on the maximum expenditure towards travel for wives while some have no limit but may restrict the travel to once in a year.
4	**Wages during Training Days**	31	Basic Wages/fixed allowances.	Some companies also offer standby wages during training days. One respondent also offers full wages during training days as the staff in on round the year wages. Additionally Travel and Boarding and lodging costs are paid by all companies.
5	**Family Medical Coverage**	31	USD 250 premium paid per month.	Medicare or similar coverage is offered in general, especially for the families round the year and for seafarers when they are on leave. Most companies go for floater coverage.
6	**Loyalty**	37	USD 200- 750 per month.	Paid basis number of years of service with company or a lumpsum amount per year.

3.2. Chief Officer/Second Engineer

S.N.	Benefit Head	%age Respondents offering the Benefit	Quantum/Range of Benefit in USD terms	Remarks
1	**Superior Certificate Allowance**	84	USD 100-400	Offered per month to those with Class I (Masters or Chief Engineers) license.
2	**Standby Wages**	56	100% Basic	Most companies offer 15 days of standby wages at 50% of basic.
3	**Hardship Allowance**	9	USD 200-250	Paid for ships more than 13 -15 years of age
4	**Family Carriage, Air Travel, Travel Insurance on company account**	56	On actual	The limit on the travel expenditure varies from company to company. Some have no limit but may restrict the travel to once in a year.
5	**Wages during Training Days**	34	Basic Wages/fixed allowances (ranging between 20-50 USD) during training days.	Some companies offer standby wages during training days. One respondent offers full wages during training days as the staff in on round the year wages. Additionally Travel and Boarding and lodging costs are paid by all companies. One company pay only if training days are more 10 days in a year.
6	**Family Medical Coverage**	28	USD 250 premium paid per month.	Medicare or similar coverage is offered in general, for families round the year and for seafarers when they are on leave. Most companies go for floater coverage.
7	**Loyalty**	31	USD 40- 750 per month.	Paid basis number of years of service with company or a lumpsum amount per year.

3.3. Second Officer/Third Engineer

S.N.	Benefit Head	%age Respondents offering the Benefit	Quantum/Range of Benefit in USD terms	Remarks
1	**Superior Certificate Allowance**	75	75-300	For Holding Class II COC
2	**Standby Wages**	31	50% -100% of Basic	Most companies offer 15 days of standby wages at 50% of basic.
3	**Family Carriage, Air Travel, Travel Insurance on company account**	34	On actual	While family carriage is allowed by most companies, the airfare, travel insurance, etc is to be borne by the officer. There is however a limit to the number of families onboard ships.
4	**Wages during Training Days**	31	Basic Wages/fixed allowances (ranging between 20-80 USD) during training days.	Additionally Travel and Boarding and lodging costs are paid by all companies.
5	**Family Medical Coverage**	18	USD 175 premium paid per month.	Medicare or similar coverage is offered in general. Most companies go for floater coverage.
6	**Loyalty**	25	50-300	Paid basis number of years of service with company or a lumpsum amount per year.

3.4. Electrical Officer

S.N.	Benefit Head	%age Respondents offering the Benefit	Quantum/Range of Benefit in USD terms	Remarks
1	**Standby Wages**	25	50% - 100% of Basic for 15 Days.	Most companies offer 15 days of standby wages at 50% of basic.
2	**Family Carriage, Air Travel, Travel Insurance on company account**	37	On actual	While family carriage is allowed by most companies, the airfare, travel insurance, etc is to be borne by the officer. Only in 10% cases the company pays for the airfare of junior officers once in two contracts.
3	**Wages during Training Days**	28	USD 20-75	Additionally Travel and Boarding and lodging cost is paid by all companies.
4	**Family Medical Coverage**	18	USD 175 premium paid per month.	Medicare or similar coverage is offered in general. Most companies go for floater coverage.
6	**Loyalty**	15	USD 50-150	Paid basis number of years of service with company or a lumpsum amount per year.

3.5. Third Officer/Fourth Engineer

S.N.	Benefit Head	%age Respondents offering the Benefit	Quantum/Range of Benefit in USD terms	Remarks
1	**Superior Certificate Allowance**	9	USD 100 -200	For Holding Class II COC.
2	**Standby Wages**	25	50% - 100% of Basic for 15-30 Days	Most companies offer 15 days of standby wages at 50% of basic.
3	**Family Carriage, Air Travel, Travel Insurance on company account**	21	On actual	While family carriage is allowed by most companies, the airfare, travel insurance, etc is to be borne by the officer. One respondent reported tha the airfare for wife is paid for every second contract.
4	**Wages during Training Days**	31	USD 20-75	Additionally Travel and Boarding and lodging costs are paid by all companies.
5	**Family Medical Coverage**	18	USD 175 premium paid per month.	Medicare or similar coverage is offered in general. Most companies go for floater coverage.
6	**Loyalty**	15	USD 50-150	Paid basis number of years of service with company or a lumpsum amount per year.

3.6. Rejoining Bonus

"Rejoining Bonus" is one account head under which a seafarer is almost certain to receive extra allowance if he/she joins a company back after the leave period. However some owners/managers who offer this incentive have also put conditions which need to be fulfilled for such payments.

In the present study it is found that only 13 companies out of the 32 participating companies (40% of the population) offer rejoining bonus. During interview with some of the rest of participating companies, it was found that this allowance which was in force till some time back, but has been dropped due to the issues/disparity it created amongst the seafarers.

Some key findings related to the rejoining bonus which emerged during the interview process are as follows:

- While some companies have clearly defined the rejoining bonus in terms of an allowance paid per month of service during the previous contract, some other companies offer this as a fixed amount irrespective of the number of months served. This makes it difficult to add rejoining bonus to the standard wages as a fixed monthly allowance across the board (for the companies who offer this incentive) for the purpose of analysis.
- Some companies pay the rejoining bonus only if the seafarers joins back within a stipulated period, like on completion of the official leave period, etc. Hence it cannot be said with surety that this allowance is always paid to all re-joiners.
- Some of the companies offer rejoining bonus only to the senior ranks; i.e. the top four positions. This is because of the shortage that exists in those ranks.

A percentile analysis of the rejoining bonus offered by the 13 participating companies is presented in the next page as **Exhibit A**. This will give those companies who do not offer this benefit to get a feel of the range in which this additional allowance is paid.

Master/ Chief Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
Rejoining Bonus	100	160	200	250	300	300	500	720	172

Chief Officer / Second Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
Rejoining Bonus	80	110	150	200	252	300	483	510	142

Second Officer / Third Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
Rejoining Bonus	60	71	94	125	129	163	200	200	52

Electrical Officer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
Rejoining Bonus	60	84	113	125	137	175	200	200	51

Third Officer / Fourth Engineer									
Figures in $ per month									
Components	Market								SD
	Min	P10	P25	Median	Mean	P75	P90	Max	
Rejoining Bonus	40	46	63	100	116	175	200	200	67

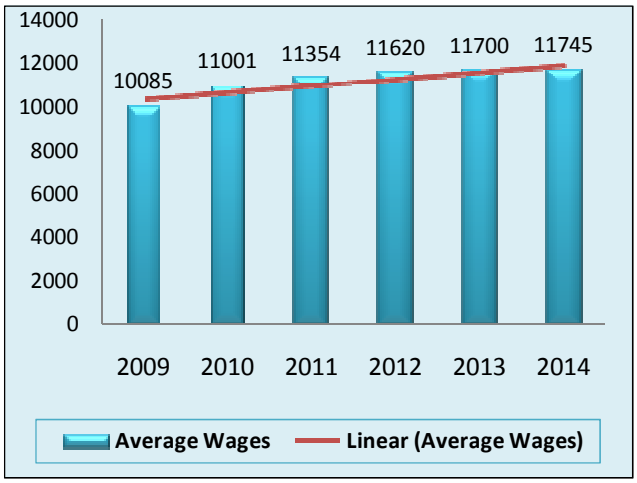
Exhibit A – Rejoining Bonus Analysis

4. Wage Trends over the Years (2009-2014)

This section represents the trends of the rate of increase in average wages for the seafaring officers from 2009 – 2014. First year wages for each rank have been taken for computation. The data has been presented in the form of graphs for various ship types as well as each rank under different ship types. Trend lines have been displayed for better understanding. In addition, tables of Year - On - Year increase in wages have been included to display the increase in average wages as compared to the previous years. The Average Year on Year growth as a percentage has also been mentioned.

4.1. Oil Tankers

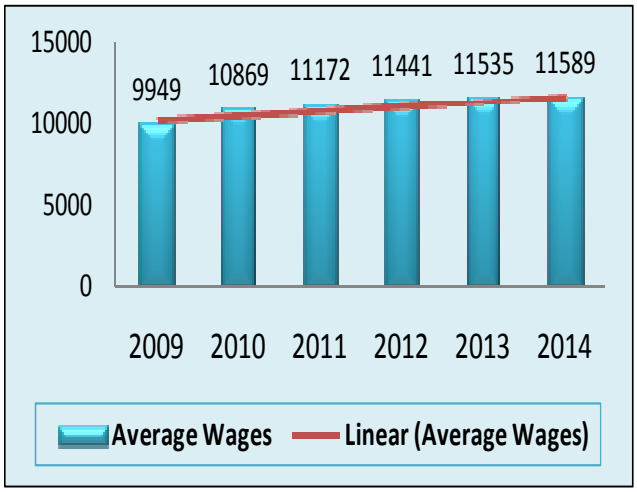
Master



Avg. YoY growth: 3.14 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013-14
9.08	3.21	2.34	0.69	0.39

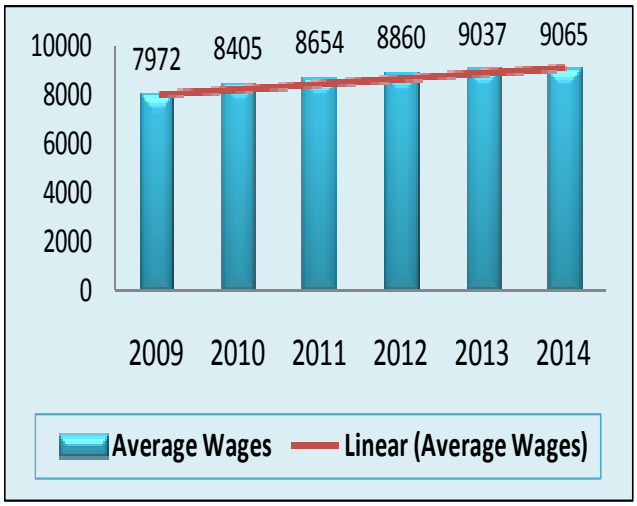
Chief Engineer



Avg. YoY growth: 3.15 %

Year on Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
9.24	2.79	2.41	0.82	0.47

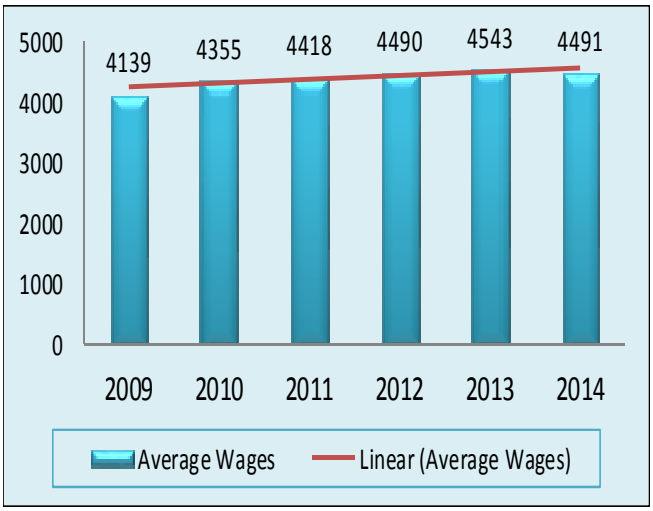
Chief Officer / Second Engineer



Avg. YoY growth: 2.62 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
5.42	2.97	2.38	2.00	0.31

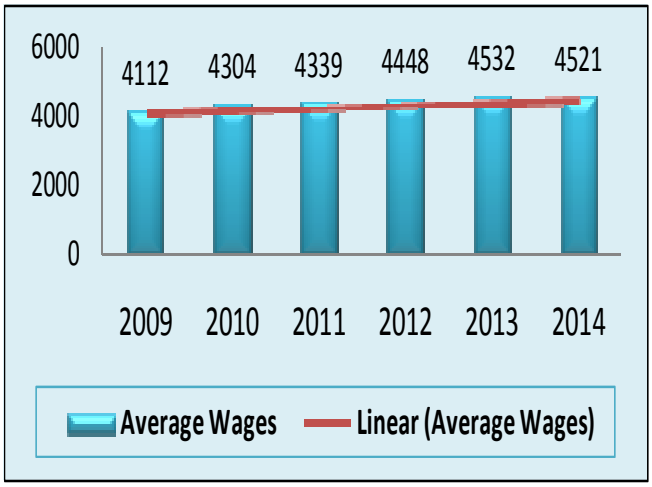
Second Officer / Third Engineer



Avg. YoY growth: 1.68 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
5.23	1.44	1.63	1.17	-1.13

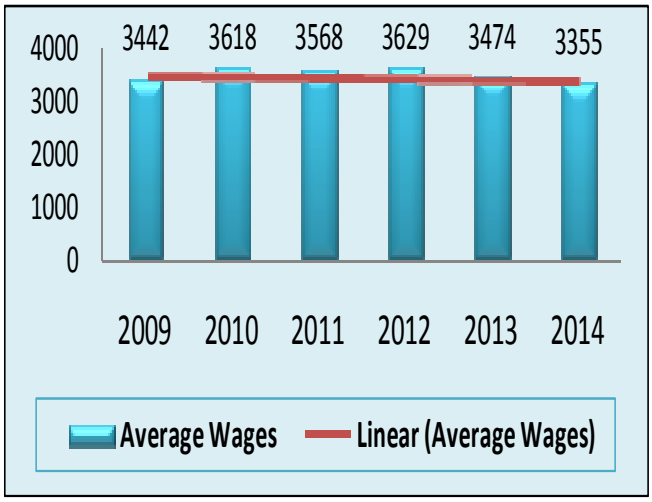
Electrical Officer



Avg. YoY growth: 1.93 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
4.67	0.80	2.52	1.88	-0.24

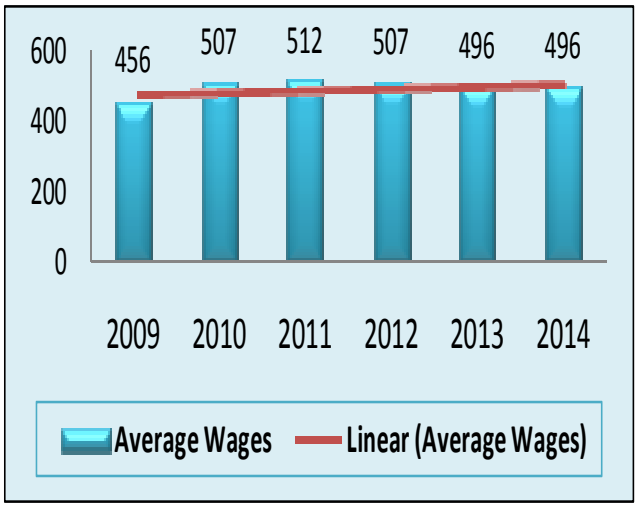
Third Officer / Fourth Engineer



Avg. YoY growth: -0.45 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
5.12	-1.38	1.72	-4.27	-3.42

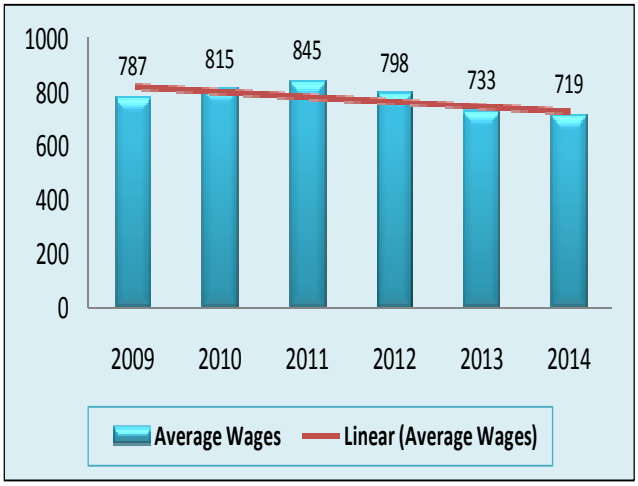
Deck Cadet



Avg. YoY growth: 1.84 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
11.20	1.04	-1.00	-2.04	0.00

Trainee / Jr. Engineer

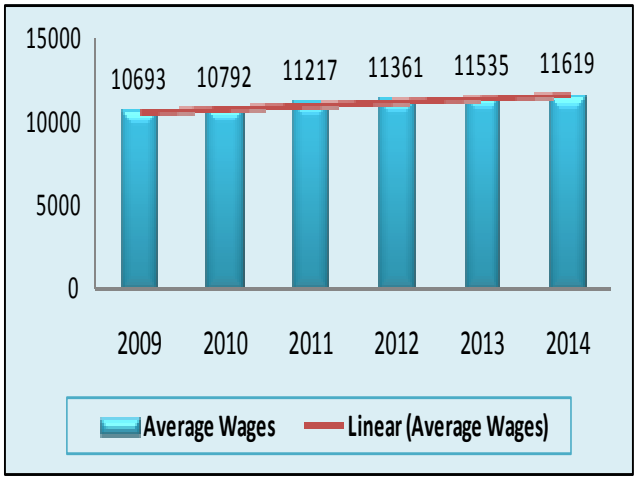


Avg. YoY growth: -1.68 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
3.53	3.75	-5.54	-8.20	-1.94

4.2. Chemical Tankers

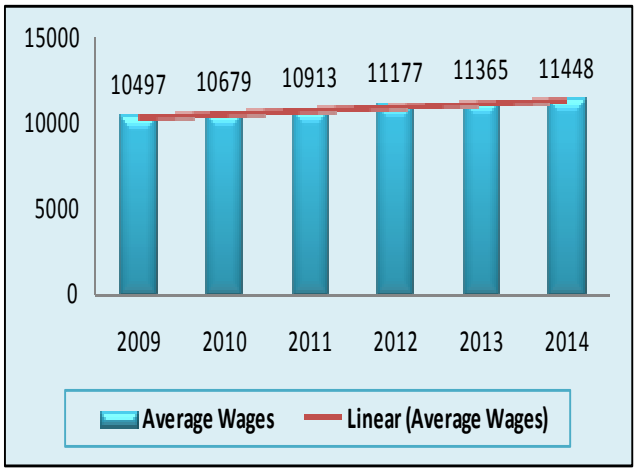
Master



Avg. YoY growth: 1.68 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
0.93	3.93	1.28	1.53	0.74

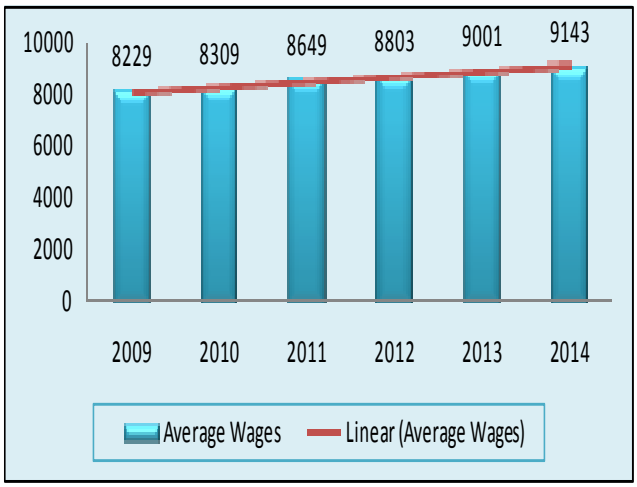
Chief Engineer



Avg. YoY growth: 1.75 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
1.73	2.19	2.41	1.69	0.73

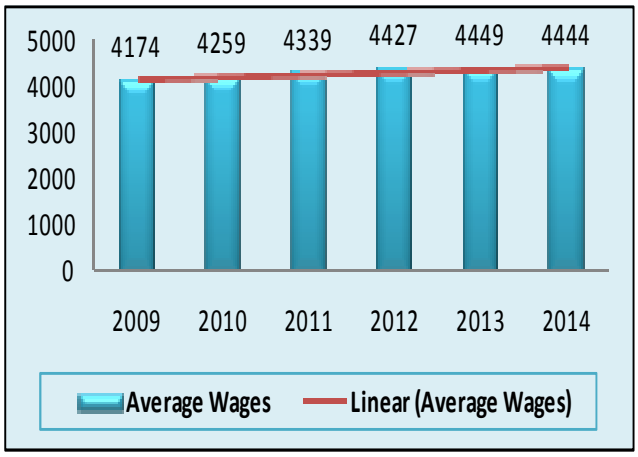
Chief Officer / Second Engineer



Avg. YoY growth: 2.13 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
0.98	4.09	1.77	2.26	1.58

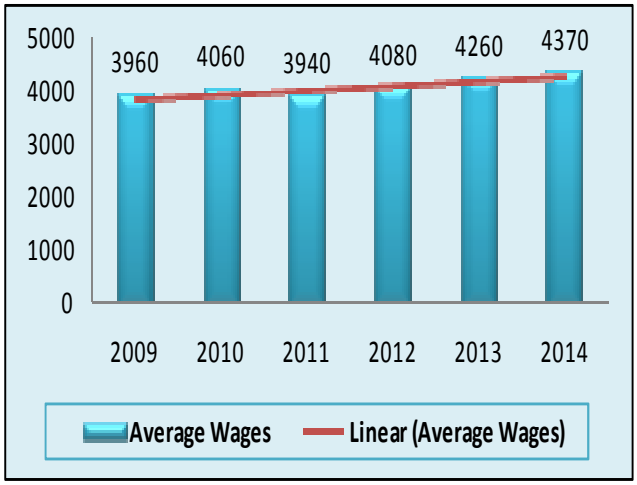
Second Officer / Third Engineer



Avg. YoY growth: 1.27 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
2.06	1.86	2.04	0.49	-0.12

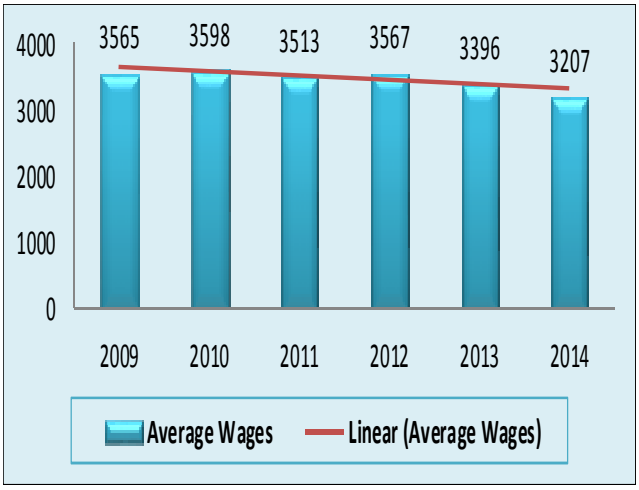
Electrical Officer



Avg. YoY growth: 2.02 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
2.51	-2.94	3.54	4.43	2.58

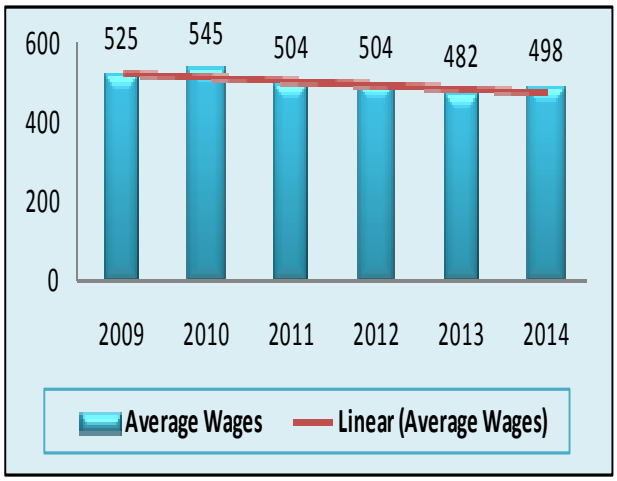
Third Officer / Fourth Engineer



Avg. YoY growth: -1.98 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
0.93	-2.35	1.54	-4.61	-5.40

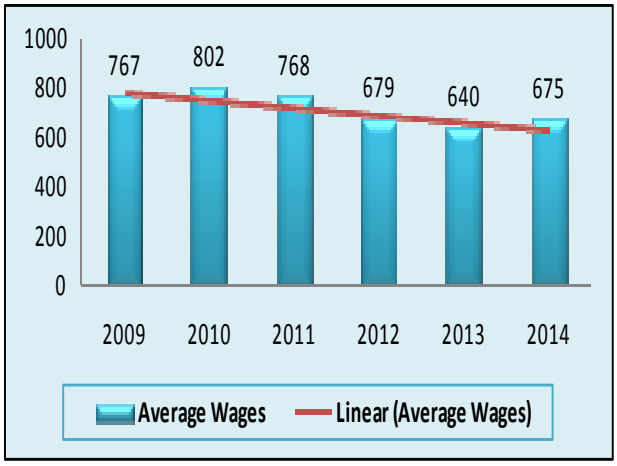
Deck Cadet



Avg. YoY growth: -0.99 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
3.78	-7.54	0.03	-4.39	3.19

Trainee / Jr. Engineer



Avg. YoY growth: -2.29 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
4.51	-4.19	-11.60	-5.75	5.57

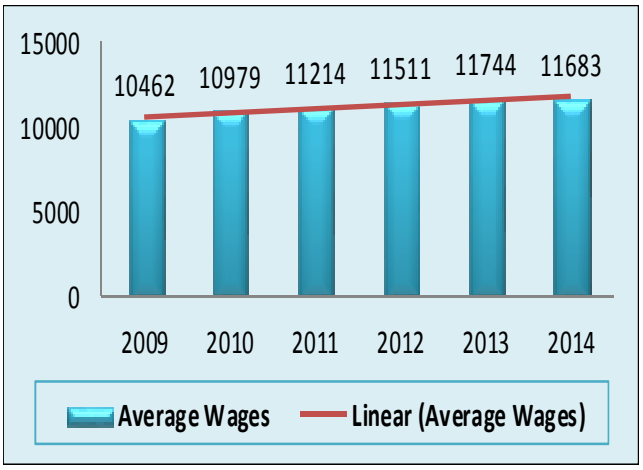
4.3. LPG

Master

Avg. YoY growth: 2.25 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
4.92	-10.29	3.16	4.97	8.48

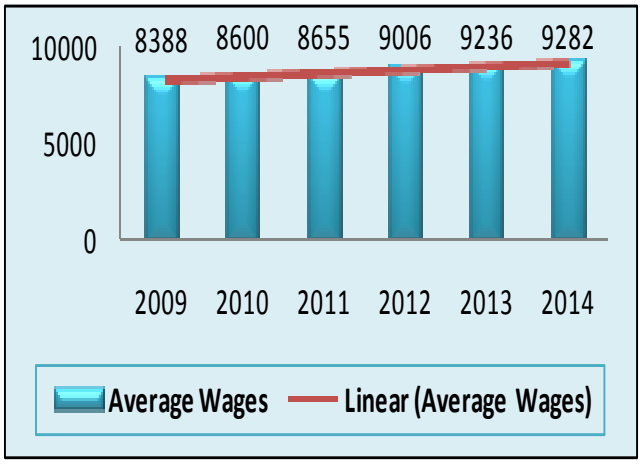
Chief Engineer



Avg. YoY growth: 2.25 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
4.95	2.14	2.65	2.03	-0.52

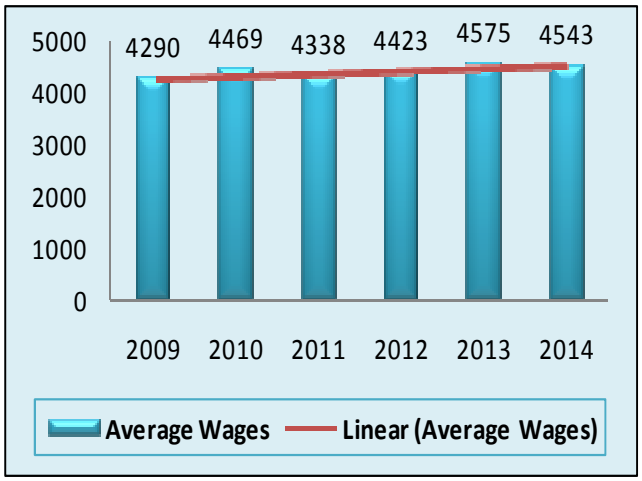
Chief Officer / Second Engineer



Avg. YoY growth: 2.06 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
2.53	0.64	4.06	2.55	0.51

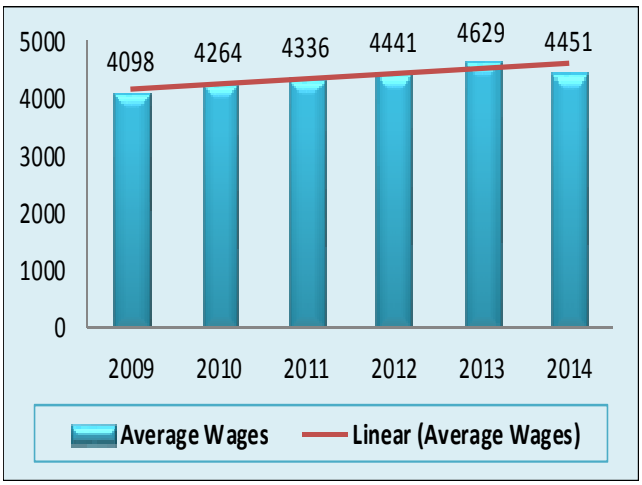
Second Officer / Third Engineer



Avg. YoY growth: 1.19 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
4.18	-2.95	1.98	3.44	-0.70

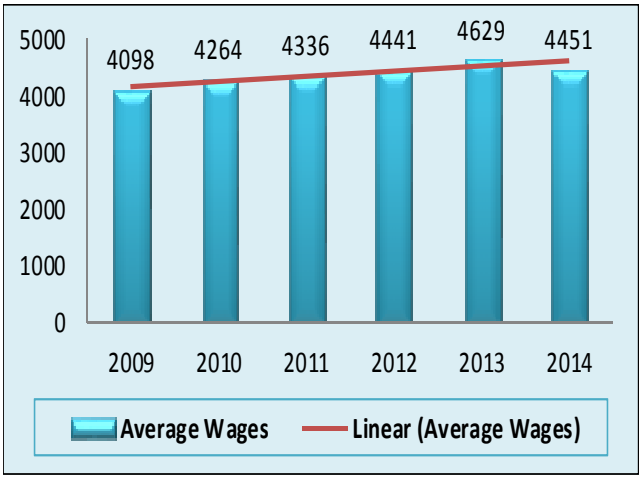
Electrical Officer



Avg. YoY growth: 1.71 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
4.06	1.67	2.42	4.24	-3.84

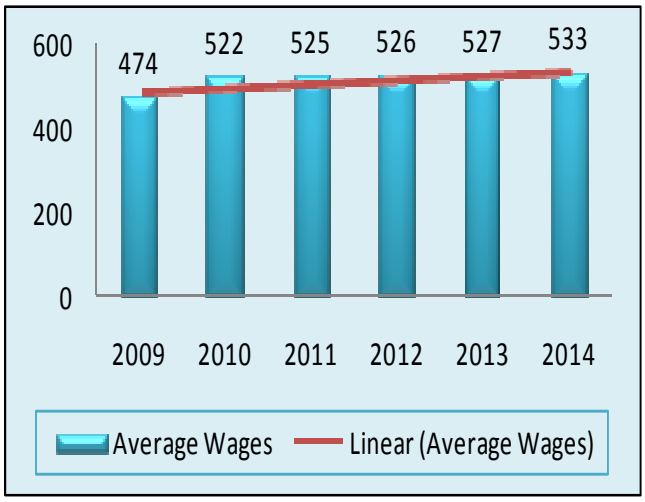
Third Officer / Fourth Engineer



Avg. YoY growth: -0.23 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
2.97	-4.40	2.30	2.21	-4.21

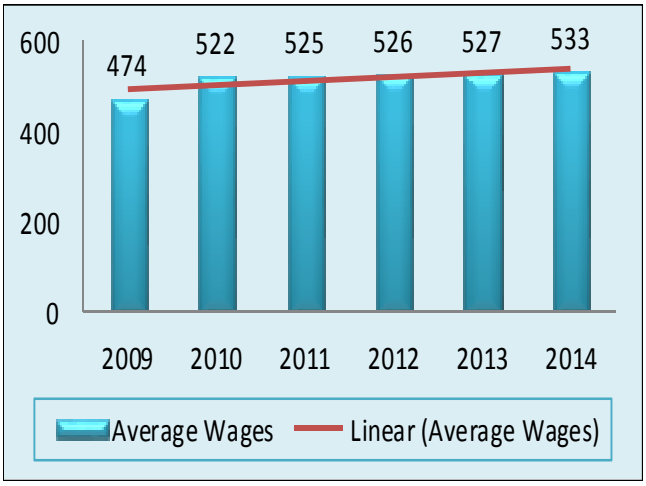
Deck Cadet



Avg. YoY growth: 2.45 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
10.09	0.71	0.14	0.15	1.18

Trainee / Jr. Engineer

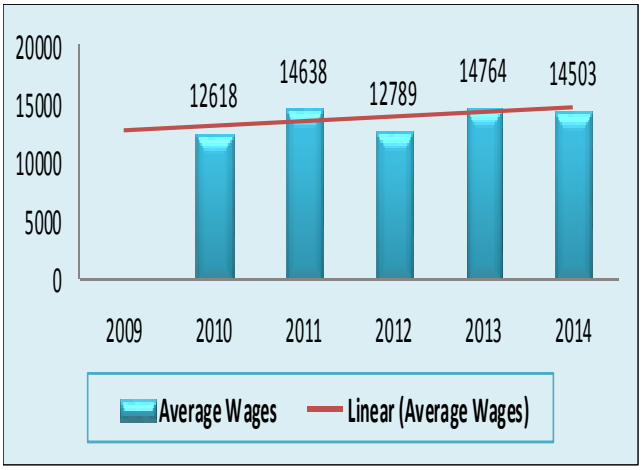


Avg. YoY growth: -1.71 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
4.44	-2.01	-0.81	-8.73	-1.42

4.4. LNG

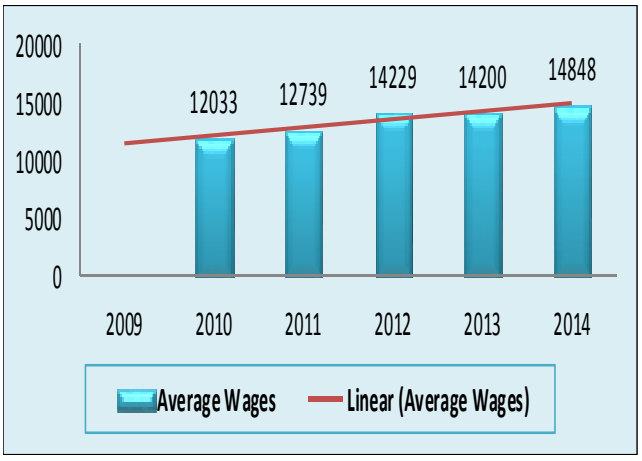
Master



Avg. YoY growth: 4.26 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
	16.01	-12.63	15.44	-1.77

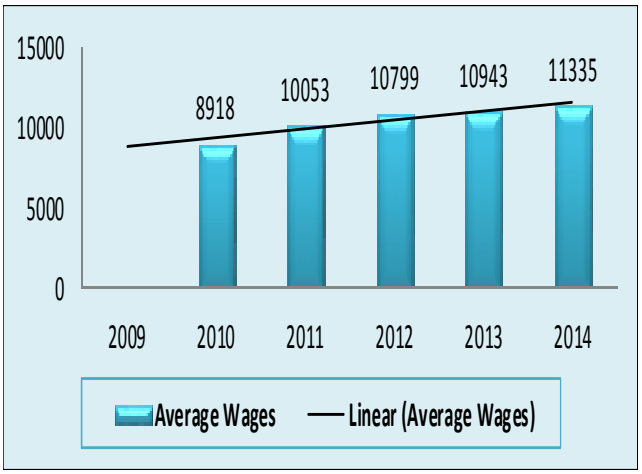
Chief Engineer



Avg. YoY growth: 5.48 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
	5.86	11.70	-0.20	4.56

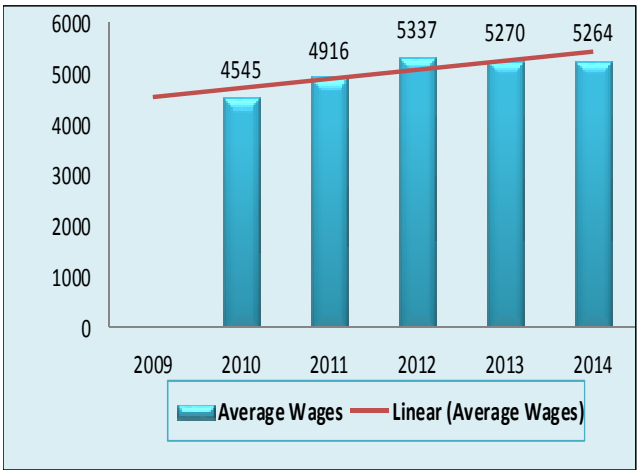
Chief Officer / Second Engineer



Avg. YoY growth: 6.27 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
	12.73	7.42	1.34	3.58

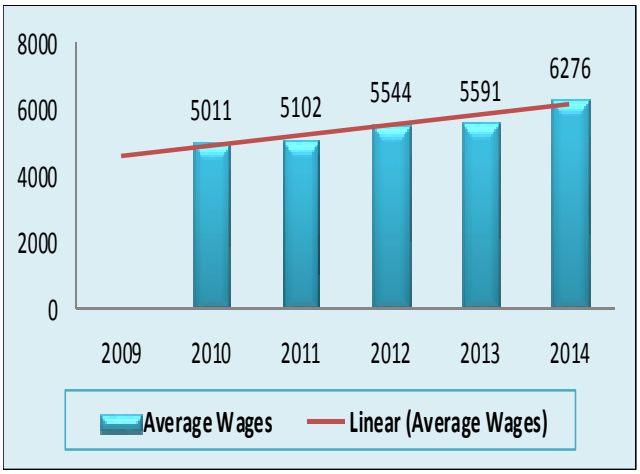
Second Officer / Third Engineer



Avg. YoY growth: 3.84 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
	8.15	8.56	-1.24	-0.11

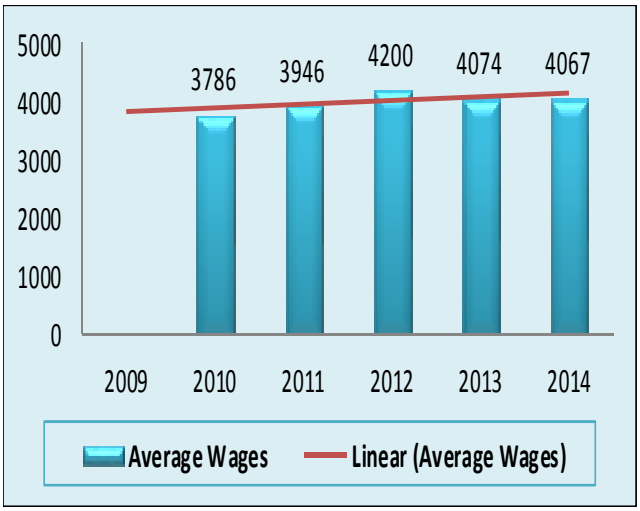
Electrical Officer



Avg. YoY growth: 5.89 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
	1.82	8.66	0.85	12.25

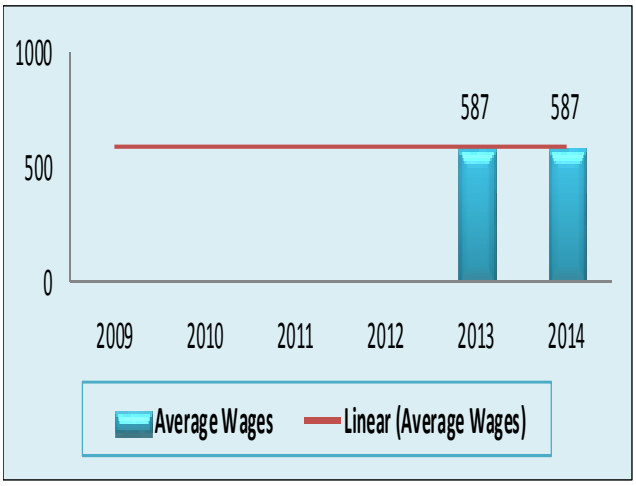
Third Officer / Fourth Engineer



Avg. YoY growth: 1.87 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
	4.21	6.45	-3.00	-0.17

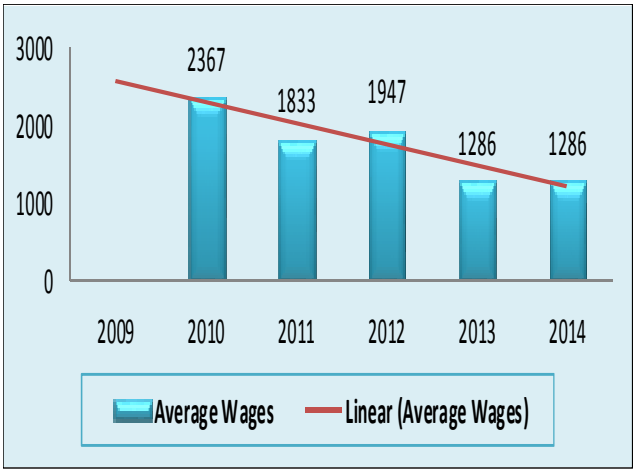
Deck Cadet



Avg. YoY growth: 0.00 %

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
				0.00

Trainee / Jr. Engineer

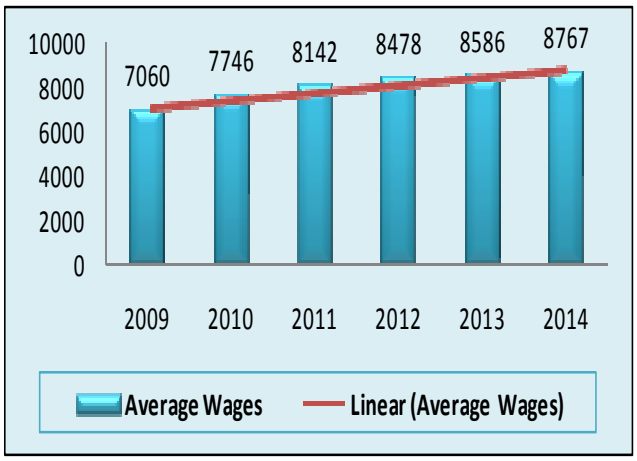


Avg. YoY growth: -12.57%

Year On Year Increase in Wages for the industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
	-22.58	6.25	-33.95	0.00

4.5. Bulk Carriers / Self Unloaders

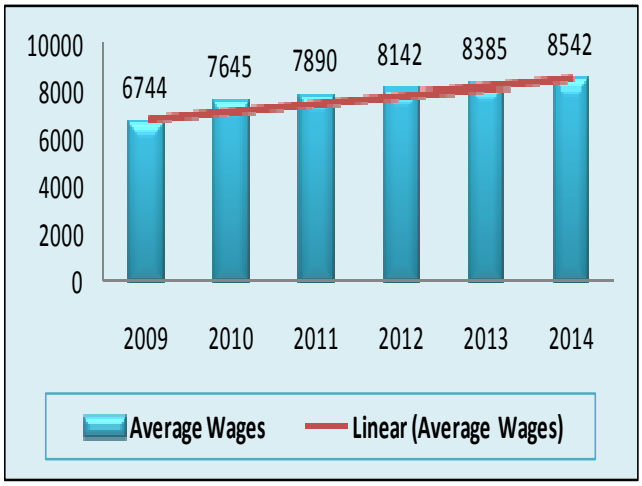
Master



Avg. YoY growth: 4.47 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
9.72	5.12	4.12	1.28	2.10

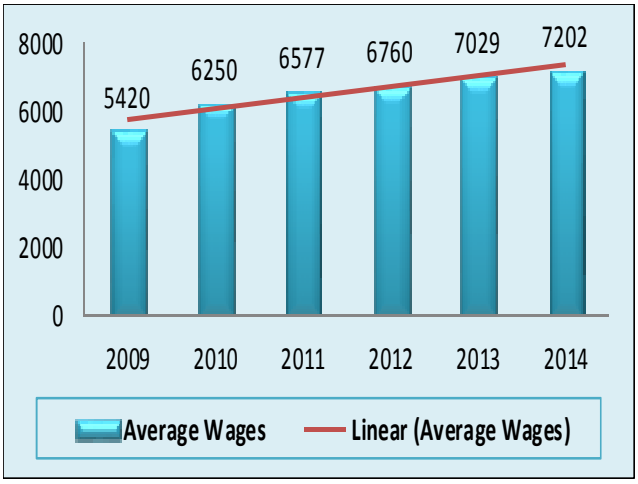
Chief Engineer



Avg. YoY growth: 4.92 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
13.36	3.20	3.20	2.99	1.86

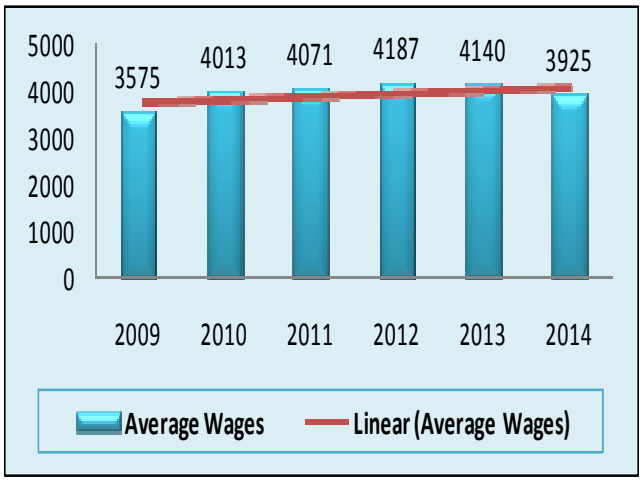
Chief Officer / Second Engineer



Avg. YoY growth: 6.12 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
15.33	5.22	2.78	3.98	3.31

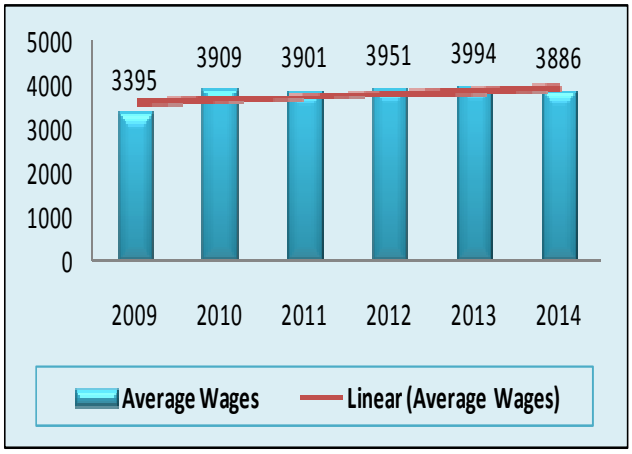
Second Officer / Third Engineer



Avg. YoY growth: 2.04 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
12.25	1.43	2.86	-1.12	-5.20

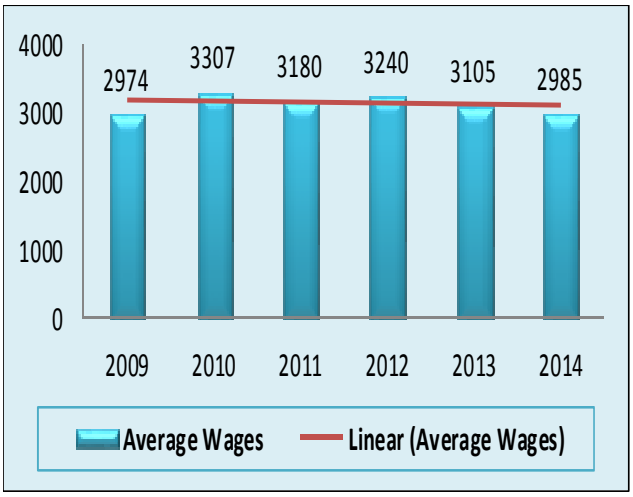
Electrical Officer



Avg. YoY growth: 2.92 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
15.13	-0.21	1.28	1.09	-2.69

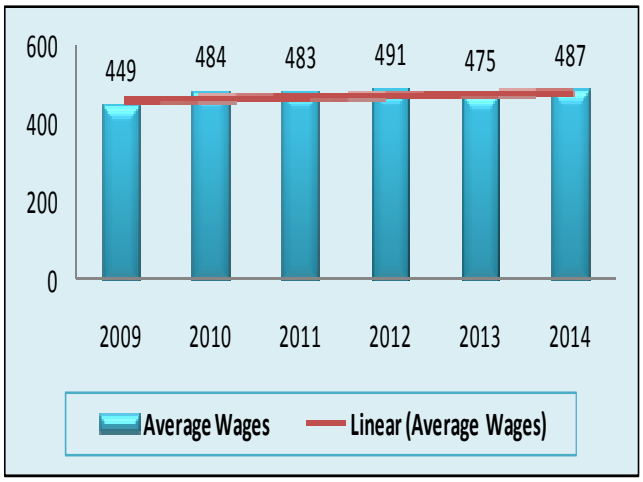
Third Officer / Fourth Engineer



Avg. YoY growth: 0.30 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
11.22	-3.86	1.90	-3.86	-3.90

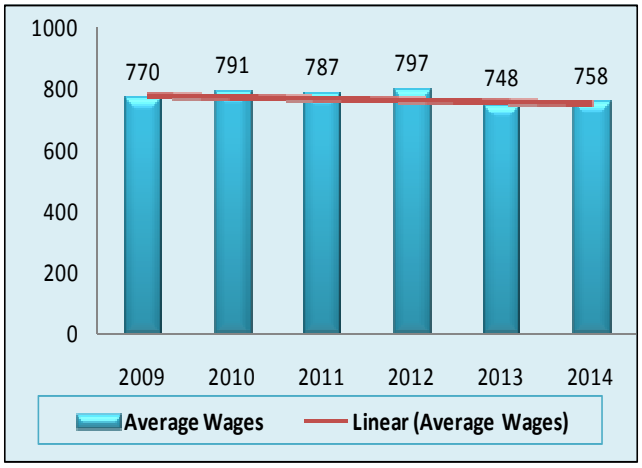
Deck Cadet



Avg. YoY growth: 1.70 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
7.82	-0.23	1.62	-3.27	2.58

Trainee / Jr. Engineer

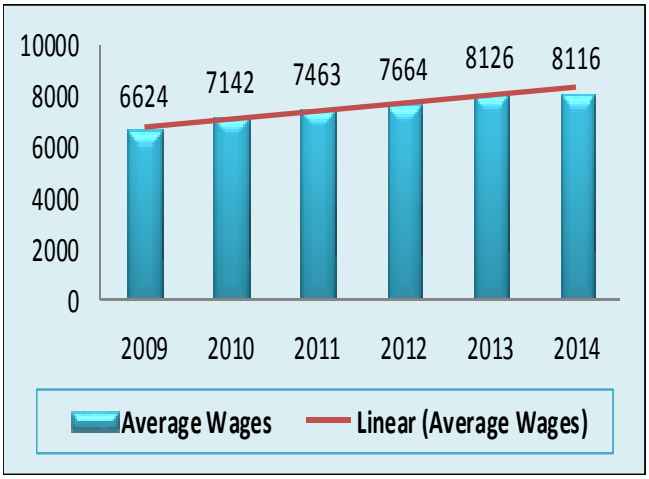


Avg. YoY growth: -0.28 %

Year On Year Increase in Wages for the Industry				
2008 - 09	2009 - 10	2010 - 11	2011 - 12	2012 - 13
2.67	-0.46	1.21	-6.14	1.34

4.6. Ro Ro / PCCs

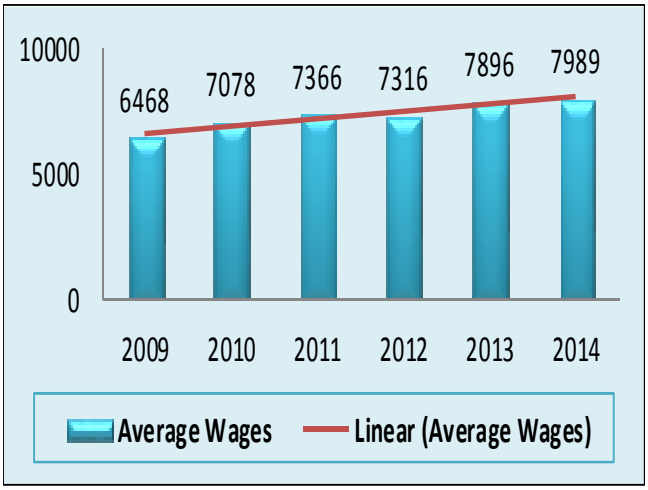
Master



Avg. YoY growth: 3.27 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
7.82	4.48	2.70	6.03	-0.13

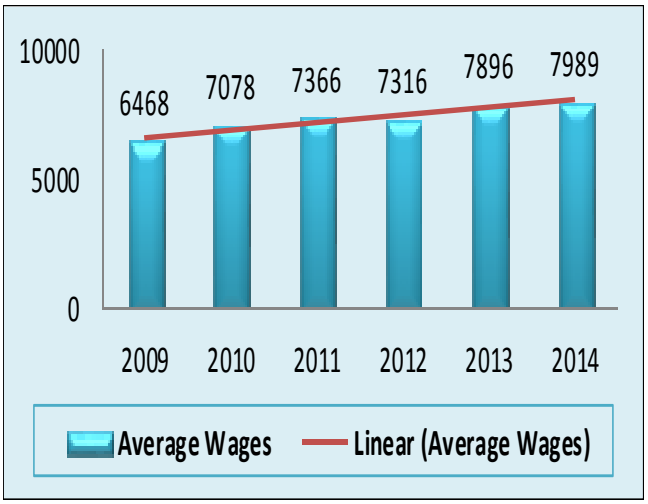
Chief Engineer



Avg. YoY growth: 3.19 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
9.44	4.06	-0.67	7.92	1.45

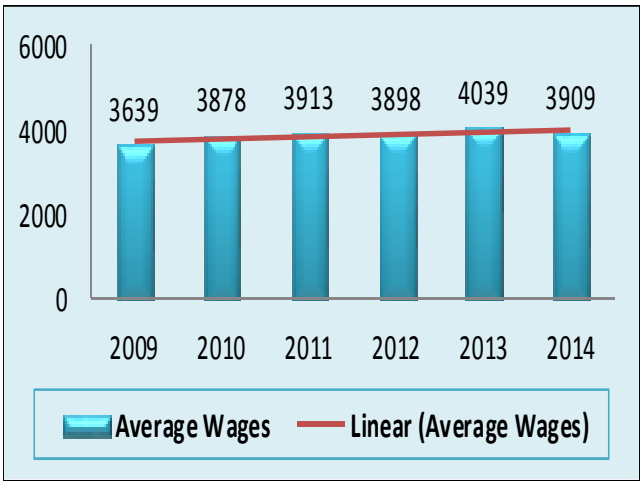
Chief Officer / Second Engineer



Avg. YoY growth: 3.91 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
8.66	6.09	0.38	8.68	0.49

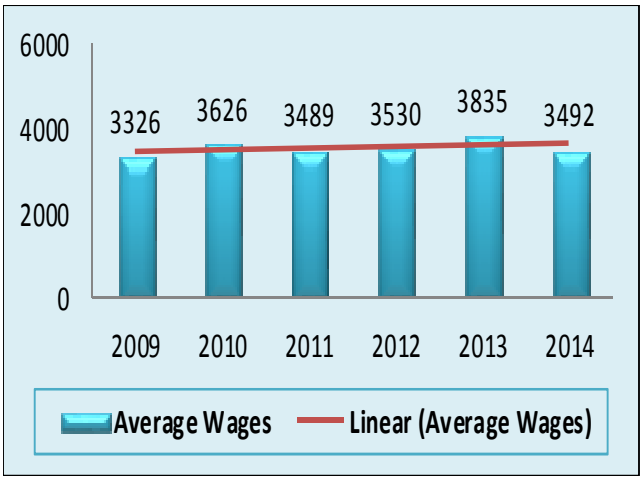
Second Officer / Third Engineer



Avg. YoY growth: 0.23 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
6.58	0.90	-0.38	3.60	-3.20

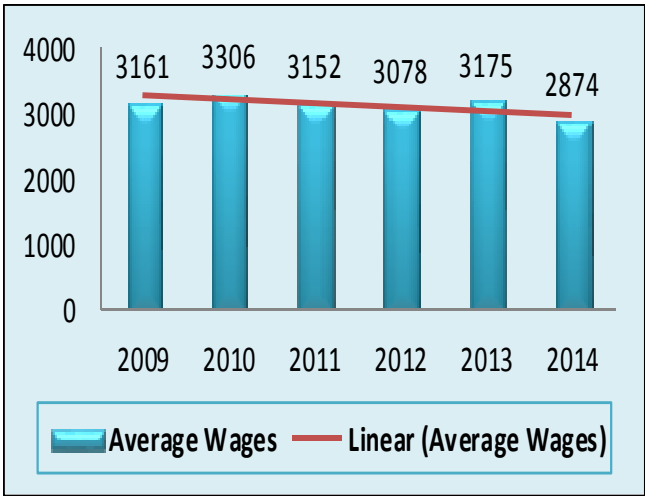
Electrical Officer



Avg. YoY growth: -0.73 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
9.00	-3.76	1.16	8.65	-8.96

Third Officer / Fourth Engineer



Avg. YoY growth: -3.22 %

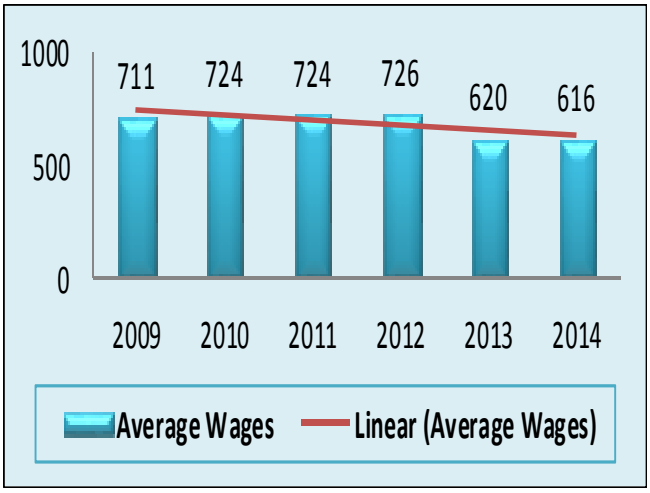
Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
4.58	-4.67	-2.34	3.14	-9.02

Deck Cadet

Avg. YoY growth: 3.07 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
3.09	2.68	-1.52	5.27	5.83

Trainee / Jr. Engineer

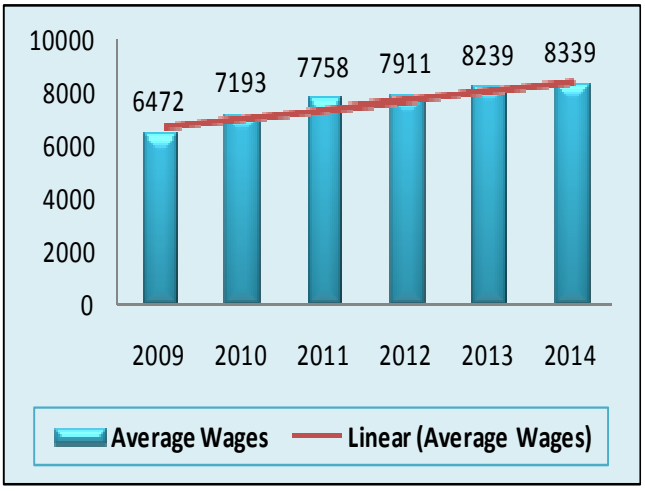


Avg. YoY growth: -4.96 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
1.88	0.00	0.23	-14.51	-5.54

4.7. Container Vessels

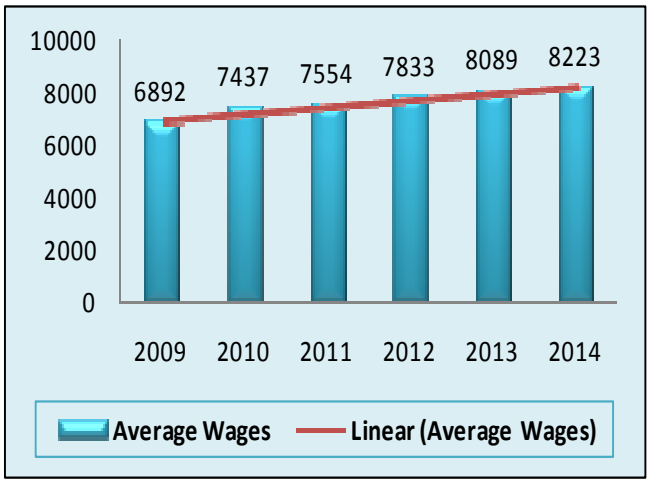
Master



Avg. YoY growth: 3.80 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
11.14	7.85	1.98	4.15	1.21

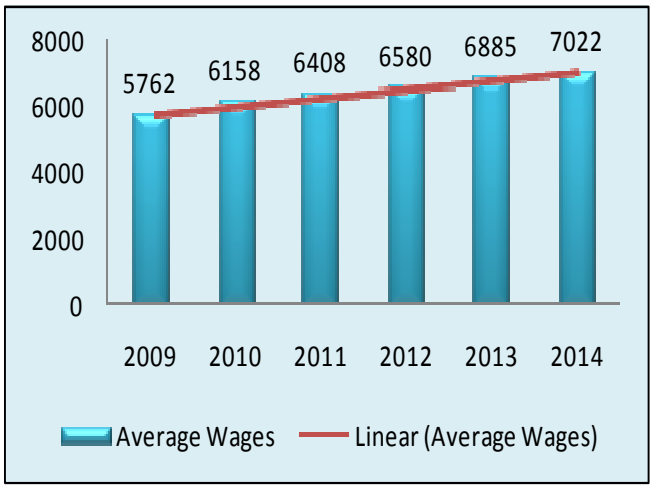
Chief Engineer



Avg. YoY growth: 2.55 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
7.90	1.58	3.69	3.26	1.66

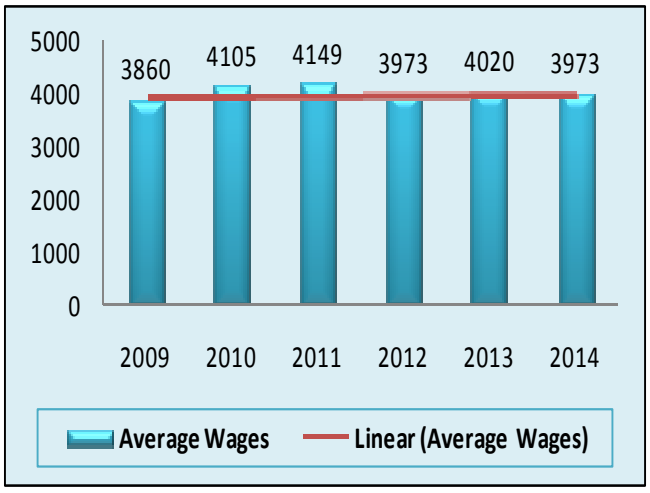
Chief Officer / Second Engineer



Avg. YoY growth: 3.34 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
6.87	4.06	2.69	4.62	1.99

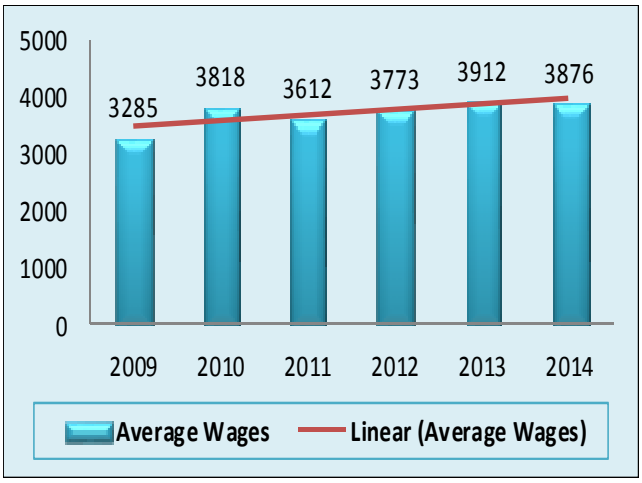
Second Officer / Third Engineer



Avg. YoY growth: -0.79 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
6.35	1.05	-4.23	1.17	-1.16

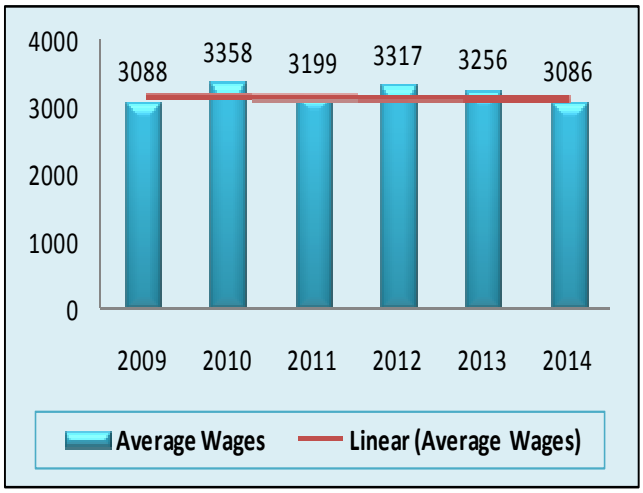
Electrical Officer



Avg. YoY growth: 0.45 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
16.21	-5.39	4.45	3.68	-0.92

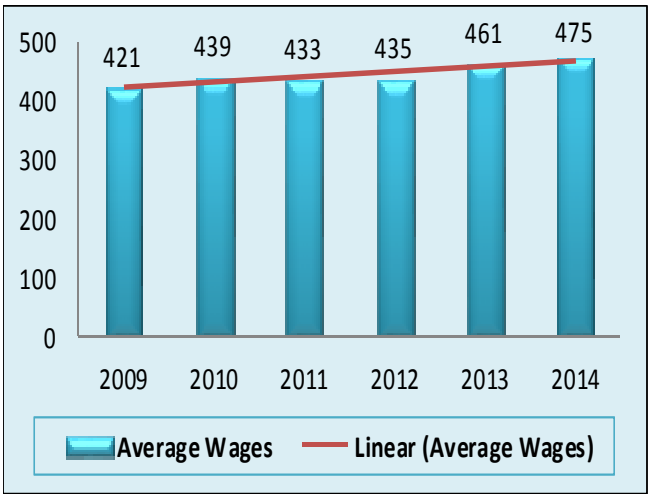
Third Officer / Fourth Engineer



Avg. YoY growth: -2.03 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
8.77	-4.74	3.69	-1.84	-5.22

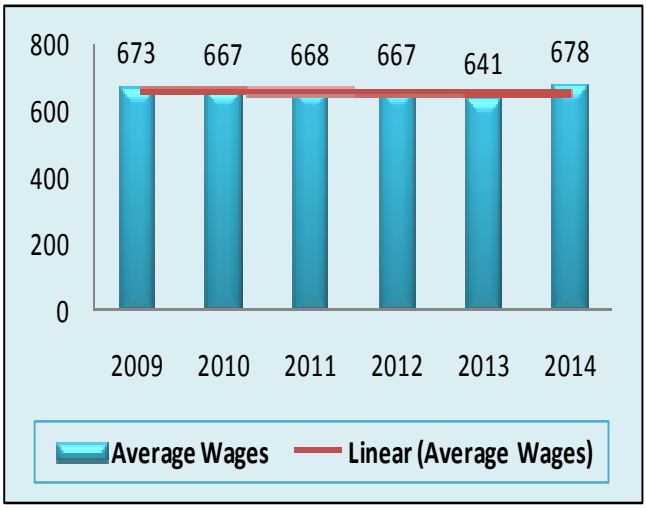
Deck Cadet



Avg. YoY growth: 1.79 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
4.43	-1.43	0.40	6.04	2.17

Trainee / Jr. Engineer



Avg. YoY growth: 0.48 %

Year On Year Increase in Wages for the Industry				
2009 - 10	2010 - 11	2011 - 12	2012 - 13	2013 - 14
-0.97	0.15	-0.10	-3.85	5.71

5. Overview of Manpower Situation and Trend of Compensation

5.1. Introduction

The Wage Benchmarking 2014 is now in its 6th year. While the participation over the years has largely been from the FOSMA member companies, this year some MASSA members have also participated in the study. This marks a very positive stage in the evolution of the report with the larger representation of seafarer positions. The total participation this year has reached 32 companies out of which 24 are from FOSMA and 8 are from MASSA with a total of 11611 on board positions. Wage benchmarking report 2013 covered 6742 onboard positions. The present report has registered 72.21 percent growth in participation over the last year.

Considering the participation of this year, the 11611 onboard positions could be assumed to cover close to 50 percent of Indian onboard positions. This assumption comes from the fact that Indian seafarers are largely spread between FOSMA, MASSA and INSA. With all key FOSMA companies and eight MASSA members participating, the study covers roughly half of the Indian seafarer population. The remaining seafaring onboard positions are from balance MASSA companies, all the Indian ship owners (INSA) and some independent companies. If we include the seafarers who may be on leave at any given time as 50 percent of onboard positions, the total number of Indian seafarers in the system are more than 35000.

A study of INDOS numbers database available in 2012 (Table1), excluding the cadets, shows the total number to be in the range of 34032. Considering the new entries of certified officers in the last two years, this figure in 2014 would be anywhere between 37000 to 40000 seafarers.

Table 1: Total Number of Seafarers on Foreign Going Vessels in 2012

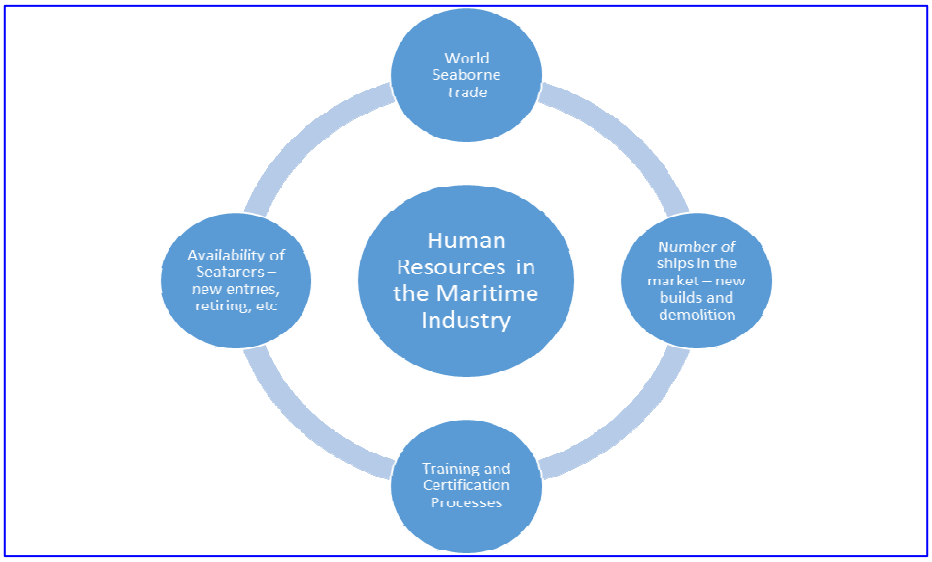
Sr. No.	OFFICERS	Numbers
1.	Master	6857
2.	Mate	2295
3.	Second mate	7163
4.	Marine engineer officer class 1	5081
5.	Marine engineer officer class 2	3783
6.	Marine engineer officer class 4	6490
7.	Electrical officers	2363
	Total	**34032**

Source: INDOS Data 2012

5.2. Factors Influencing the HR and its Compensation in the Maritime Sector

Understanding the functioning and dynamics of the markets for wages for human resource is highly crucial for all the stakeholders. Manpower situation in the maritime sector is impacted by several factors such as world seaborne trade, number of vessels, capacity of vessels to facilitate trade and the number of qualified and trained seafarers available. Shipping industry is known for its highly volatile nature and historically there has always been a mismatch between these aspects, one lagging behind the other, which creates an imbalance in the system and shipping oscillates between situations of surplus and deficit.

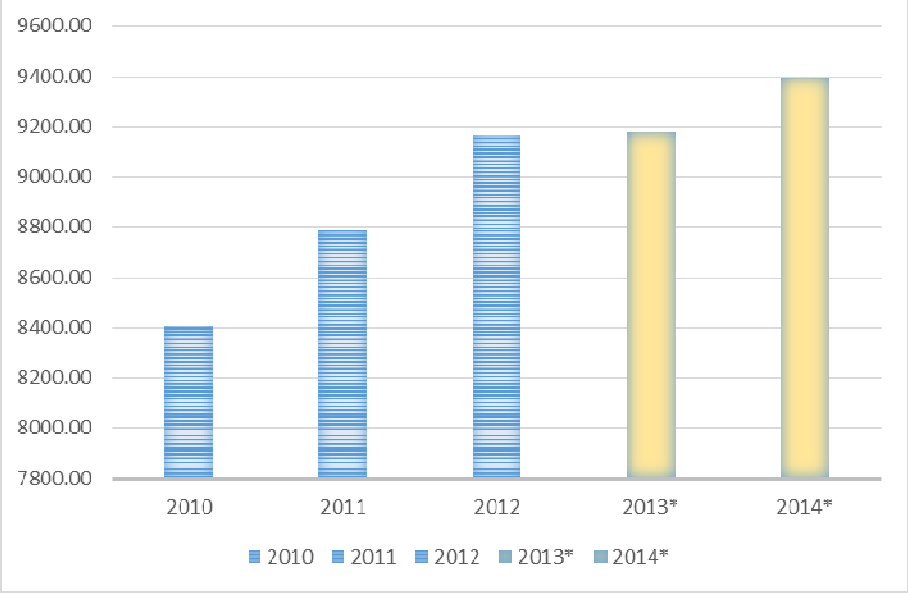
Figure 1: HR in the Maritime Industry



5.2.1. World Seaborne Trade

The Seaborne trade (in terms of total million tons loaded) has grown at Average YoY 3.67 percent for the period of 2010 to 2014 as shown in the Figure 2.

Figure 2: Growth of World Seaborne Trade (2010-2014*)

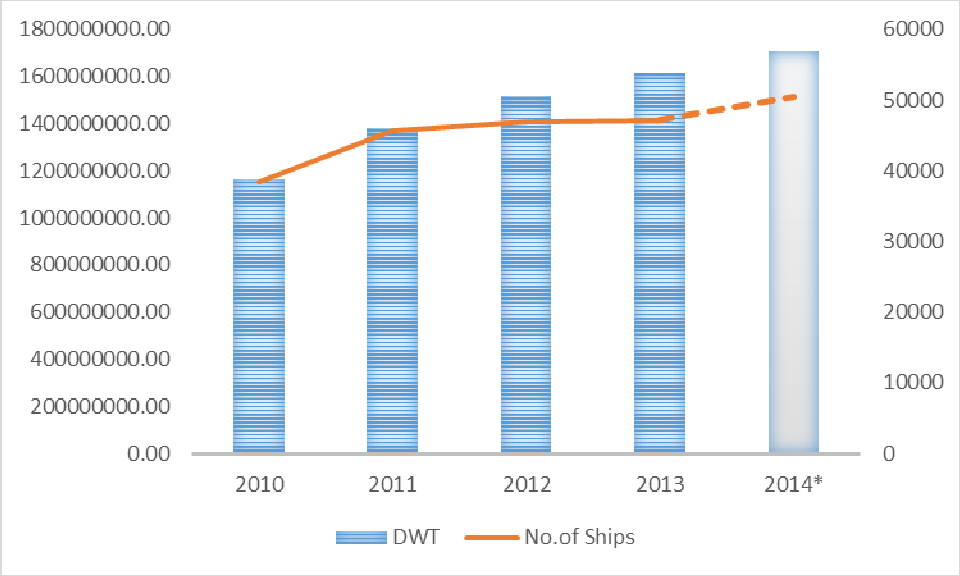


2013* and 2014* are Forecasted values by Regression method
Source: Review of Maritime Transport 2013 (UNCTAD)

5.2.2. Numbers of Vessels and Capacity of Vessels

Analysis of data shows that DWT has recorded Average YoY of 10.04 percent for the period of 2010 to 2013 while number of ships has grown at Average YoY of 5.90 percent for the same period (Figure 3). The Average YoY growth of number of ships is on the 38412 ships which existed in 2010 increasing to 47122 vessels in 2013; indicating an increase of 8710 ships into the system.

Figure 3: Growth of DWT and Number of Vessels in World (2010 to 2013)



Value for 2014* is a Forecasted value by Regression method
Source: Review of Maritime Transport Various Issues (UNCTAD)

Table 2: YoY Growth of DWT and Number of Vessels

Years	DWT	No. of Vessels
2010	5.50	1.52
2011	18.23	18.87
2012	10.15	2.71
2013	6.30	0.47
Average YoY	**10.04**	**5.90**

5.2.3. New Buildings and Demolitions

In the year 2012 China, the Republic of Korea and Japan have emerged as the top ship building countries having a share of around 92 per cent of the world's new tonnage. In this China tops with more than 40 per cent share. Almost 57 per cent of the tonnage delivered in 2012 was of dry-bulk ships, followed by oil tankers (18.4 per cent) and container ships (14.4 per cent).

Overall the new build orders have sharply declined over the years after witnessing the peaks of 2008 and 2009. While the Bulk Carriers where new orders were almost 80 percent of the existing fleet, it has reduced to 20 percent; for tankers the earlier orders which were close to 50 percent of the existing fleet have dropped to 10 percent.

Table 3: Deliveries of New Buildings in Thousands of GT (2012)

Vessels	China	Republic of Korea	Japan	Philippines	Rest of world	World total
Oil tankers	4729	10311	1592	251	626	17510
Bulk carriers	28217	8988	13571	2342	1126	54244
General cargo	1833	260	472	0	583	3147
Container ships	1984	10540	390	0	773	13687
Gas carriers	179	173	152	0	18	522
Chemical tankers	68	188	200	0	44	499
Offshore	967	506	108	102	819	2502
Ferries and passenger ships	100	71	36	0	875	1082
Other	600	453	910	0	131	2094
Total	**38677**	**31490**	**17431**	**2695**	**4995**	**95287**

Source: Review of Maritime Transport 2013 (UNCTAD)

As far as demolition of vessels is concerned, the Indian subcontinent continued to be the major ship-breaking region in 2012, accounting for more than 70 per cent of the tonnage (GT) reported sold for breaking.

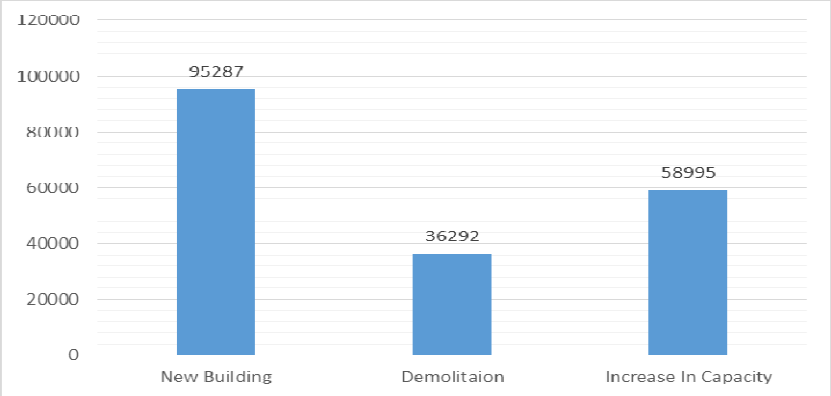
Table 4: Demolition of Thousands of GT Tonnage (2012)

Vessels	China	India Subcontinent	Bangladesh	Pakistan	Indian	Turkey	Others	World Total
Oil tankers	1459	369	1197	2711	191	21	200	6149
Bulk carriers	5533	5446	6064	1959	205	365	720	20293
General cargo	316	393	1166	28	-	291	471	2665
Container	316	553	2954	7	216	124	76	4246
Gas carriers	4	89	30	-	-	77	38	238
Chemical tankers	7	11	333	-	21	-	27	399
Offshore	154	4	44	649	156	75	100	1182
Ferries and passenger ships	12	4	82	-	-	139	66	303
Other	55	158	386	17	-	146	56	817
Total	**7856**	**7027**	**12256**	**5371**	**789**	**1238**	**1754**	**36292**

Source: Review of Maritime Transport 2013 (UNCTAD)

Analysis indicates that the in year 2012 the overall capacity has gone up by 58995 thousand GT (Figure 4).

Figure 4: World Capacity of Merchant Fleet (2012)



Overall assessment of the available capacity of vessels indicates that the supply is much higher than the requirement. If the worldwide yards were to drop their capacities of new building to around 40 percent, there would still be sufficient vessels to meet the demands of 2015. Lesser demand and utilization of capacity also reflects in limitation of demand for the human resource.

5.2.4. Manpower Supply Situation

After analyzing the sea borne trade and capacity in numbers and volumes to facilitate trade it is also important to examine the supply side situation of human resource. For this, the study first evaluates the global manpower situation, various geographical areas that are major source of human resource and then focuses on the situation existed in India.

5.2.4.1. Assessment of Global Manpower Requirements

Globally for vessels above 2,000 GT (50,000 ships), the crewing requirements are approximately 1.2 million (table 5). In numeric terms the global fleet is growing approximately one third to a half of the growth in tonnage terms due to upsizing. This suggests the rate of growth in crew requirements is slowing.

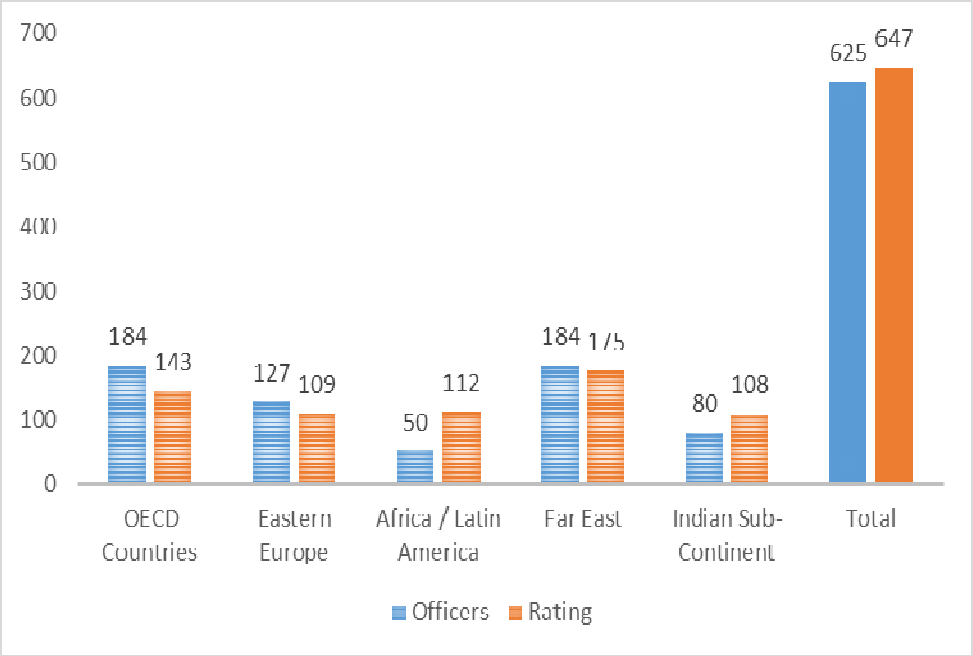
Table 5: Manpower Requirement

Vessels	Average Crew per Vessel	Total Crew in System
Oil Tankers	18	120,705
Bulkers	21	209,158
Containers	19	98,933
LPG	16	19,997
LNG	27	10,567
PCC & Ro Ro	20	32,366
Passenger	164	245,260
Offshore	14	148,596
World Fleet	**21**	**1.2 million**

Source: Clarkson Research/ International Labour Organization, January 2014

According to BIMCO/ISF manpower 2010 update, the supply and demand for ratings for various vessels is somewhat balanced. However, there is still shortage in supply for senior rank officers especially for tankers and offshore support vessels. According to this update, far-east emerges as the most prominent supplier of officer and ratings.

Figure 5: Supply of Officer and Rating by Broad Geographical Area (Numbers: 1000)



Source: BIMCO/ISF Manpower 2010 Update

5.2.4.2. Supply Situation in India: Pre-Sea Education and Certification Processes

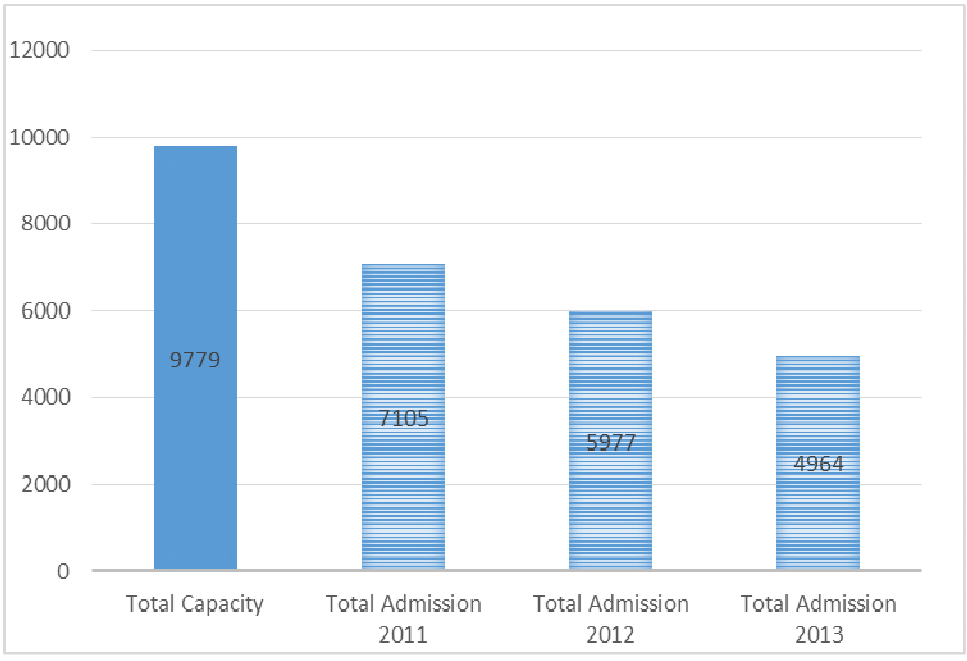
At present there exists a huge surplus of junior officers in the industry. This is a result of the large capacity that exists at the pre sea training institute. In the study of Wages Benchmarking 2009, the capacity to train deck and engineering cadets was found to be close to 6000 which is currently 9779 as per Table 6. Unfortunately the utilization of this capacity has been steadily coming down and is as low as 50.76 percent in the year 2013. This indicates a reduced interest for joining merchant navy as a career.

Table 6: Intake Capacity for various Courses in Indian Maritime Institutes

Course	Total Intake Capacity	Total Admissions			Admissions as Percentage of Total Capacity		
		2011	2012	2013	2011	2012	2013
Graduate Marine Engineers Course	1690	1245	1001	934	55.27	59.23	73.67
Course for Diploma Holders	256	238	144	79	30.86	56.25	92.97
Alternative Training Scheme	68	23	23	14	20.59	33.82	33.82
Marine Engineering Degree	2286	1775	1490	1450	63.43	65.18	77.65
Diploma in Nautical Science (DNS)	3313	2815	2447	1453	43.86	73.86	84.97
B. Sc (Nautical Science) Degree	1175	846	546	611	52.00	46.47	72.00
3 Years B. S. (Maritime Science)	31	23	0	21	67.74	0.00	74.19
B. S (Nautical Technology) Degree	200	80	79	79	39.50	39.50	40.00
Electro-Technical Officer Course	760	60	247	323	42.50	32.50	7.89
TOTAL	**9779**	**7105**	**5977**	**4964**	**72.66**	**61.12**	**50.76**

Source: DG Shipping (2013)

Figure 6: Total Intake Capacity and Actual Total Intake



An analysis of placement record of training institutes conducting DNS course indicate 72 percent placement for the first eight DNS batches (up to Feb 2008).

Number of Candidates passed 2M FG exam from the IGNOU DNS stream for the period from 2004 to Feb 2008 was 55 percent. Placement record of 3 and 4 years degree courses in nautical stream is 57 percent. (Source: DGS website)

5.3. Indian Officers' Wage Trends (2010 to 2014):

The wages of seafarers are a result of the total supply and demand situation, which in turn is affected by the factors discussed in previous section. These factors impact the wages as a tangible effect while attitudes, performance, soft skills as the intangible effects.

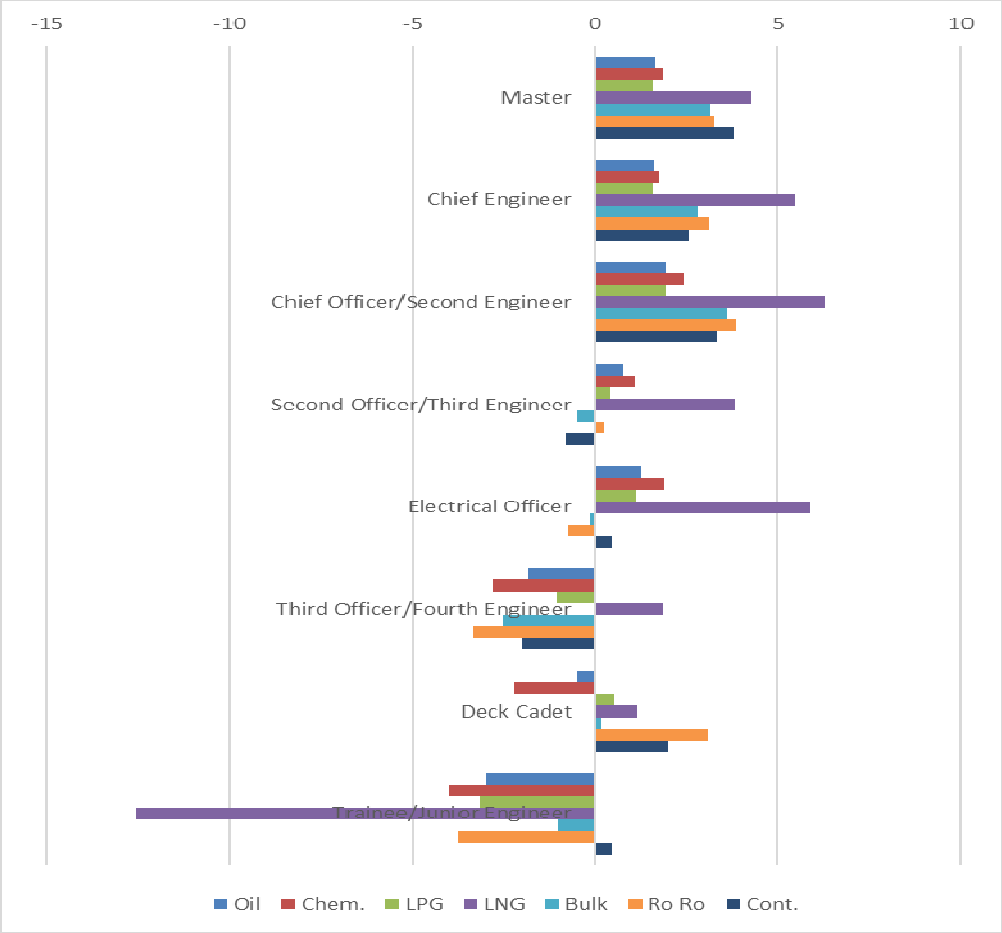
The wages of Indian seafarers have by and large remained steady in the last 3-4 years. The sharp 12 to 16 percent increase which was witnessed during the period from 2004 to 2009 has slowly flattened to give a range from -3.86 to 3.34 percent during the years 2010 to 2014 (-3.86 percent for Junior and Trainee Engineers to a maximum of 3.34 percent for Chief Officer and Second Engineer wages as shown in Table 7. On an average there is only 1.5 percent growth in wages for the officer categories (excluding the cadets, junior and trainee engineers) combined during this period.

Analysis of wages of all the ranks on board ships clearly indicates that senior rank registered marginal positive growth of Average YoY for the period of 2010 to 2014, while the junior ranks like Trainee/Junior Engineer and Third Officer/Fourth Engineer have registered negative growth of Average YoY for the same period. The highest increment is on account of LNG wages which ranges from 1.87 percent to 6.27 percent.

Table 7: Trends in Average YoY of Wages from 2010-2014 for all Ranks on Various Categories of Vessels (Percent)

Ranks	Oil	Chem.	LPG	LNG	Bulk	Ro Ro	Cont.	Average Wages for Ranks
Master	1.66	1.87	1.58	4.26	3.15	3.27	3.8	2.80
Chief Engineer	1.62	1.75	1.57	5.48	2.81	3.12	2.55	2.70
Chief Officer/Second Engineer	1.92	2.42	1.94	6.27	3.61	3.86	3.34	3.34
Second Officer/Third Engineer	0.78	1.07	0.44	3.84	-0.51	0.23	-0.79	0.72
Electrical Officer	1.24	1.9	1.12	5.89	-0.13	-0.73	0.45	1.39
Third Officer/Fourth Engineer	-1.84	-2.79	-1.03	1.87	-2.5	-3.33	-2.03	-1.66
Deck Cadet	-0.5	-2.18	0.54	1.13	0.18	3.07	1.99	0.60
Trainee/Junior Engineer	-2.98	-3.99	-3.18	-12.57	-1.01	-3.74	0.48	-3.86

Figure 7: Trends in Average YoY of Wages from 2010-2014 for all ranks on Various Categories of Vessels (Percent)



5.4. Growth of Indian onboard officers positions

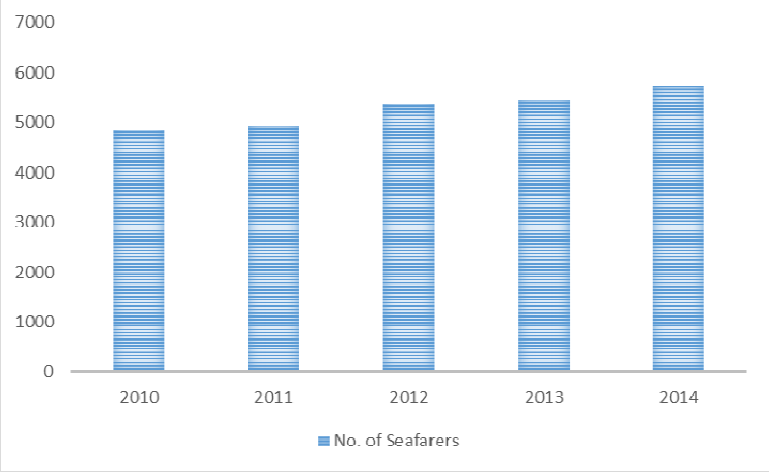
As the composition of companies who have participated in this study has been changing over the years, data of 19 companies who have consistently participated in the survey over the years was separately studied to get a realistic trend of growth in Indian seafarer numbers on board. These 19 companies include three large ship managers, seven ship owners and nine manning agencies.

Interestingly, despite the overall industry perception that Indians are losing berths on board, this study shows that the total numbers of Indian on board positions have grown at the Average YoY of 4.25 percent for the period 2010 to 2014.

The trend of growth in the number of Masters in the Figures on the following pages displays Average YoY of 3.97 percent while number of Chief Engineers grew at 4.78 percent. Numbers of Chief Officers have recorded growth of 4.60 percent while the Second Engineers have grown at the rate of 2.29 percent. Number of Second Officer and Third Engineer positions has recorded growth of 7.62 and 7.56 percent respectively. Number of Third Officer, Electrical Engineer and Fourth Engineer has recorded growth of 9.42 percent, 3.16 percent and 4.59 percent respectively during this period.

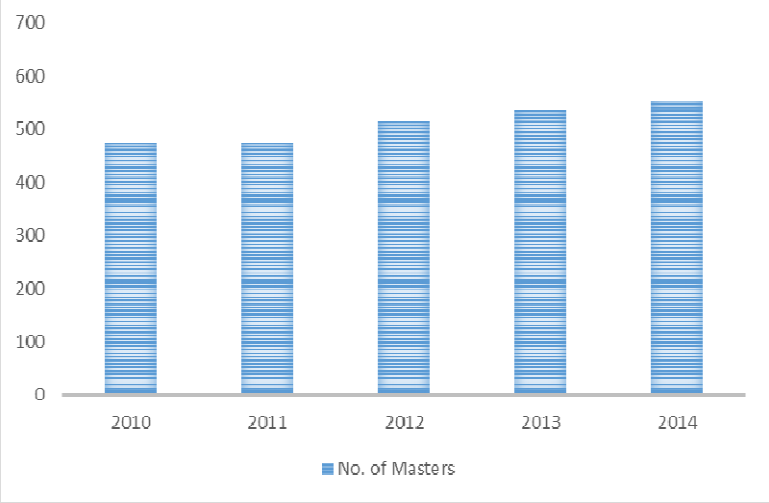
Figure 8 A to 8 J: YoY and Average YoY Growth of Number of Positions On Board

Figure 8 A: Total Seafarers



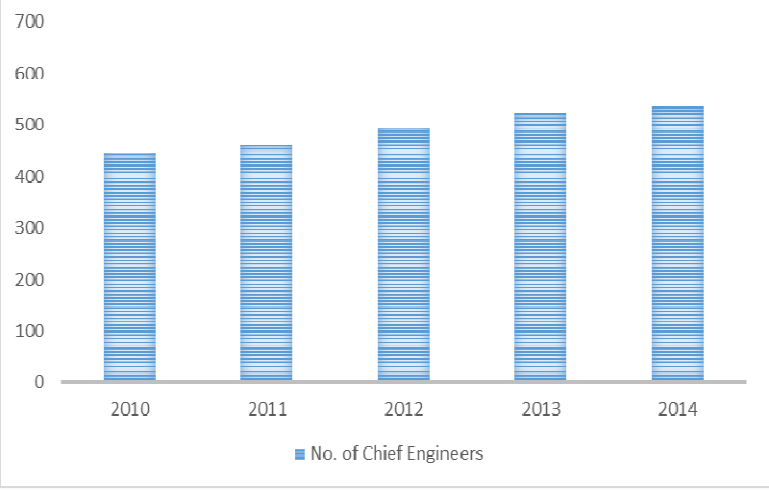
Avg YoY= 4.25%

Figure 8 B: Master



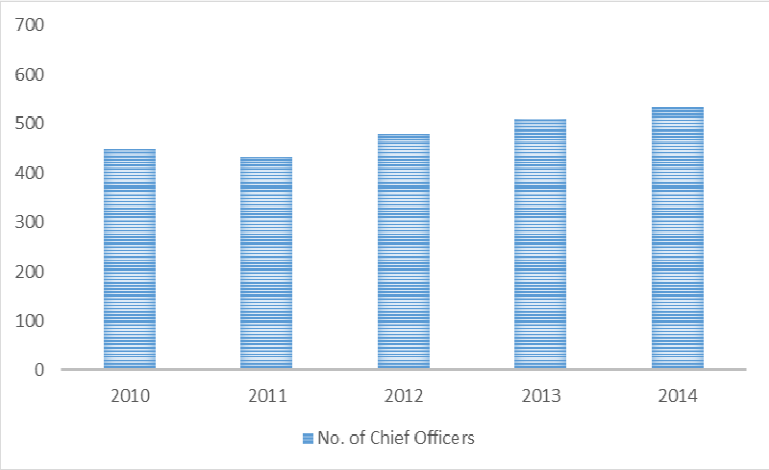
Avg YoY= 3.97%

Figure 8 C: Chief Engineer



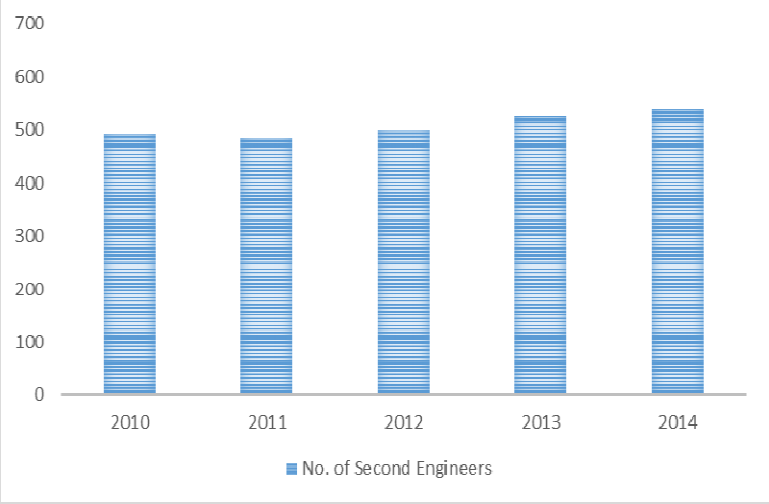
Avg YoY= 4.78%

Figure 8 D: Chief Officer



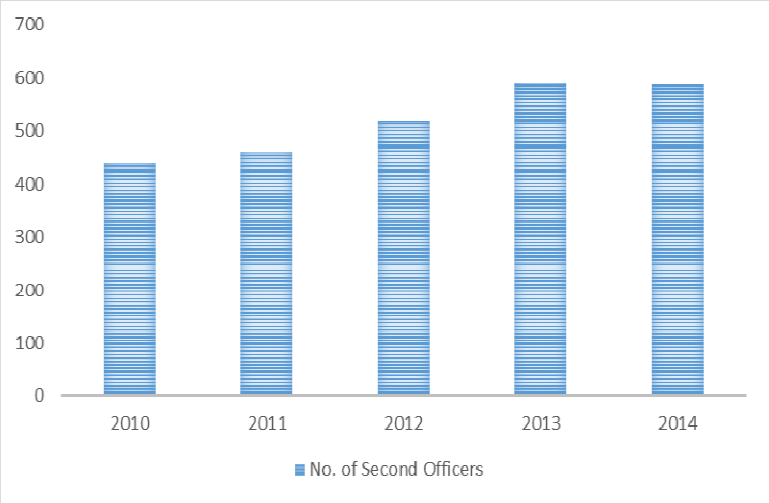
Avg YoY= 4.60%

Figure 8 E: Second Engineer



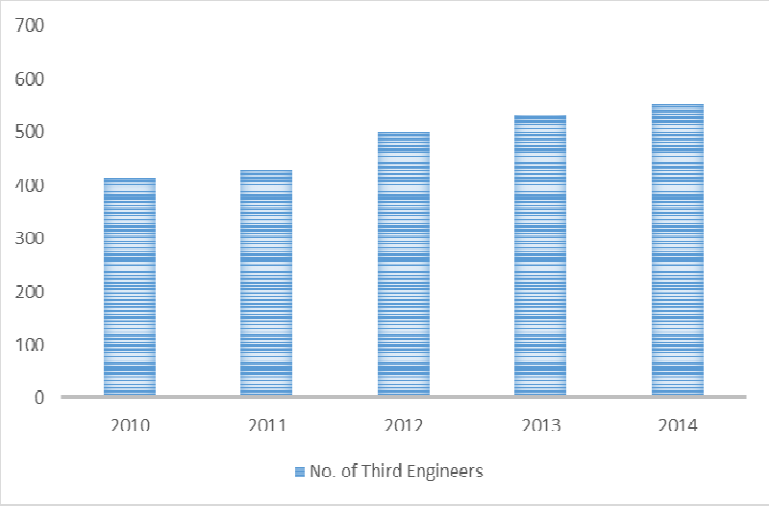
Avg YoY= 2.29%

Figure 8 F: Second Officer



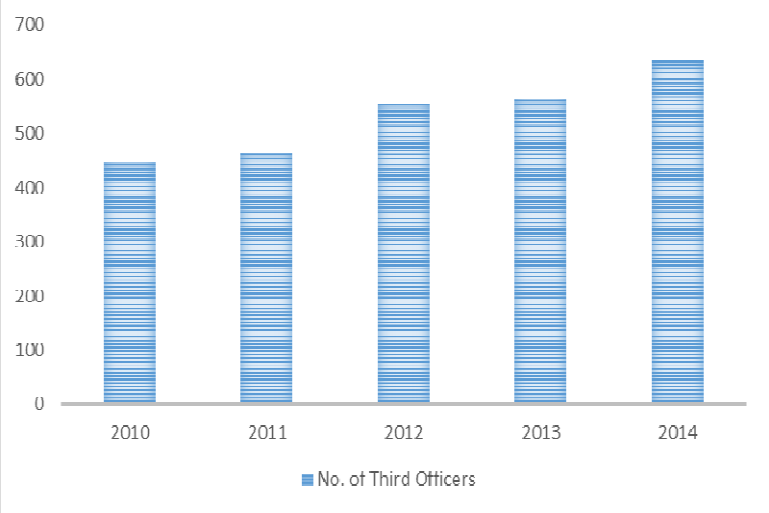
Avg YoY= 7.62%

Figure 8 G: Third Engineer



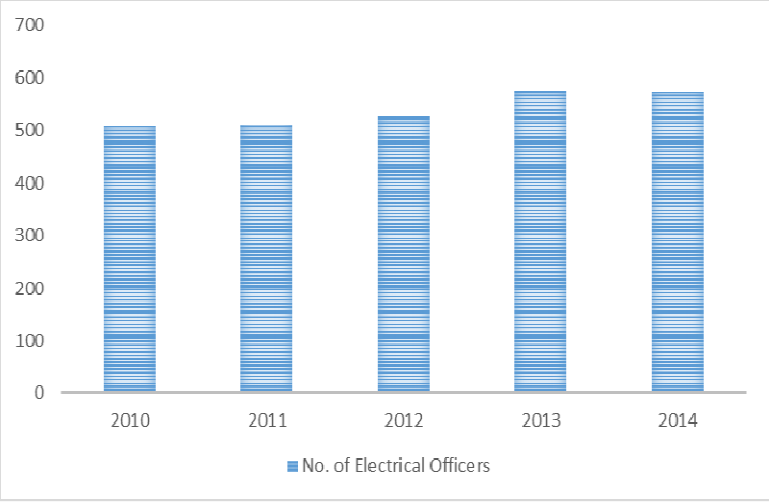
Avg YoY= 7.56%

Figure 8 H: Third Officer



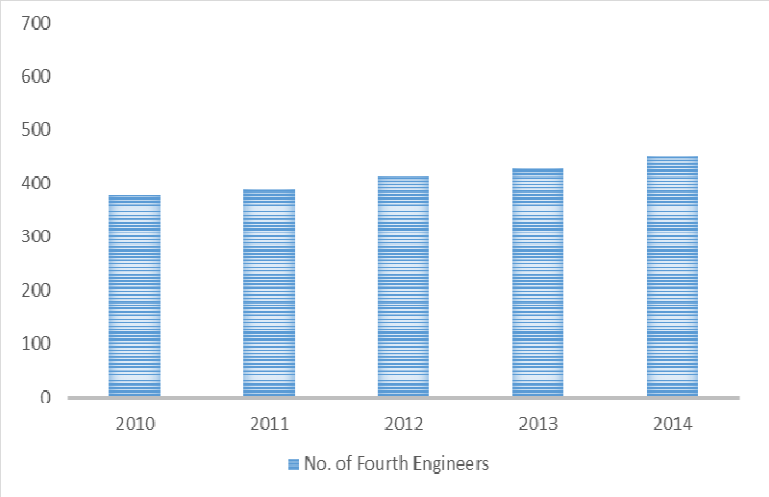
Avg YoY= 9.42%

Figure 8 I: Electrical Officer



Avg YoY= 3.16%

Figure 8 J: Fourth Engineer



Avg YoY= 4.59%

5.5. Conclusion

The aim of the study is not to simply measure the wages paid by companies for different types of vessel for various ranks but to provide an empirical tool to the participant companies for strategic decision making and policy formation for better management of their respective human capital. At a macro level the study is a synergic move by key members of FOSMA and MASSA for addressing human resource issues faced by Indian man power market.

As explained earlier, the study of the wages for 32 companies gives a general guide line of wages for various ranks employed on the different types of vessels. As the number of companies participating in this study have varied from year to year, to get a definitive yardstick we referred to the data of 19 companies who have been consistently participating in the study since 2009.

Examination of entry levels indicates saturation in the job scenario, which has resulted in reduced numbers opting for merchant navy as a career. Analysis of data of various courses offered by Indian system shows that institutes are still taking in numbers which are far more than what the industry can absorb. In 2013, for around 1708 positions of fourth engineers available, the pre sea institutes inducted 2477 candidates which exceed the demand by almost 45 percent. In case of 3rd officers, while the onboard positions were around 2100, the institute intake was almost at par i.e. 2164.

On considering the total number of seafarer data from 19 companies, it shows 4.25 percent growth in the number of officers where in the total number of onboard positions are 5736. Even if we consider the total Indian officer onboard positions to be 20000 and assume this 4.25 percent growth to apply across the board, the 4.25 percent increase translates to just around 850 on board positions per year.
For a period from 2010 to 2013 this would mean 2550 positions. On the other hand the increase of around 8710 vessels in numbers worldwide during this period offered between 50000-65000 officer positions of which only 2550 are taken up by Indians amounting to around 4 to 5 percent capture of available berths. As an important maritime country known for its human resource supply and wide spread maritime training facilities, this is indeed below par performance.

If we were to address this issue of Indians capturing lesser berths than other nationalities, a three pronged approach will have to be taken up on war footing.

1. **Increased Competitiveness** through further correction in wages to make the compensation more reasonable and realistic. While the junior rank wages have been reduced to some extent to improve the competitiveness as against other nationalities, further corrections may be required.

2. **Quality Improvement** through better training and improvement in examination system. This is one area which seems to be needing maximum attention. With institutes having lesser intake there is every chance of cutting corners in imparting training to keep the economics favorable. Further, the systems of competency courses and examination has been under criticism by the industry (through interviews with participants of this study) and will need corrections to improve the numbers passing, especially for higher level COCs.

3. **Effective Marketing:** There have been several initiatives in the recent times to spread awareness about Indian seafarers. However firstly through the measure 1 and 2 above the product has to be made good and then it would be possible to project the right image of the Indian Seafarer.

For sustaining the status of the most preferred supplier of human resource, Indian industry has to change the approach and the systems of developing human resource for maritime field.

6. Appendix 1 - Statistical Data Analysis Tools

Arithmetic Mean

The arithmetic mean is the **Average** of a set of values. It is the sum of all the values in a set divided by the number of data in the set. The mean is not necessarily the middle value in a set of data. It is also not the most appearing value which is called **Mode**. The middle value in a set of data is called as **Median**. Half of the population lies above it while the other half of the population lies below it.

Percentile

Percentile is the value of a variable below which a certain percent of observations fall. So the 10th percentile is the value (or score) below which 10 percent of the observations may be found.

The 25th percentile is also known as the **First Quartile** (Q1); the 50th percentile as the M **Median** or **Second Quartile** (Q2); the 75th percentile as the **Third Quartile** (Q3).

Standard Deviation

The standard deviation of a set of data is a computational representation of the variability of the population with regard to the variable. It shows the nature of the deviation of the data from the mean of all the data in the set. In probability theory and statistics, standard deviation is a measure of the variability, a data set, or a probability distribution. A low standard deviation indicates that the data points tend to be very close to the **Mean**, whereas high standard deviation indicates that the data are spread out over a large range of values.

Z - Score

In statistics, a standard score indicates how many standard deviations an observation is above or below the mean. It is a dimensionless quantity derived by subtracting the population mean from an individual raw score and then dividing the difference by the population standard deviation. This conversion process is called standardizing or normalizing.

A standard score or Z score is the measure of the position of the data under the normal distribution curve.

Trend line

In statistics, linear regression refers to any approach to modeling the relationship between variables denoted y and variables denoted X, such that the model depends linearly on the unknown parameters to be estimated from the data.

YOY Growth

The calculation is based on the straight-line growth rates method. The formula used for Straight line growth rate calculation is:

$X = (1/N) * (E - B)/B$

Where,

B = wages in previous year.

E = wages in following year.

N = number of years between beginning and ending year, which in the present study is 1.

Average Year on Year Growth

This average is calculated for the YoY growth figures between the years 2009 and 2014 to get an understanding of the rate at which the wages have risen or fallen during the last 6 years.

CAGR calculator is a also a useful tool to get information on the average growth rates but more appropriate when determining an annual growth rate of data whose value has fluctuated widely from one period to the next. CAGR is often used to describe the growth over a period of time which may be more than 10 years or so.

Forecasting by Linear Regression Method

Regression is a statistical tool to examine the relationship of two variables. Linear regression uses one independent variable to explain the outcome of the dependent variable.

Forecasting by Linear Regression:

$Y = A + bX + u$

Where

Y is Dependent variable,

X is Independent variable,

A is the intercept

b is the slope

u is the regression residual