

Wages in the Deep Sea Transportation Industry: Freighters and Tankers

BY ELIZABETH DIETZ

In the mid-1980s, the U.S. Navy markedly increased its use of private contractors to ship supplies to its fleet. The Employment Standards Administration (ESA)¹ determined that the wages of seafaring workers employed by these private contractors should be covered by the Service Contract Act of 1965,² which requires that all private establishments providing services to the Federal Government must pay their employees prevailing locality wages and related benefits. At the request of the ESA, the Bureau of Labor Statistics (BLS), conducted a series of surveys on wages of sea-going personnel, including unlicensed workers, aboard deep sea freighters and tankers.³

Wages aboard deep sea freighters

The most recent survey of occupational wages aboard deep sea freighters was conducted by BLS in July 1996. Other surveys were conducted in November 1987, 1988, 1989, 1991, and 1993.⁴ The July survey showed that workers in the engine department commanded the highest monthly wages of any of the groups of unlicensed freighter workers. Chief electricians, at \$3,072 per month, had the highest wages. (See table 1.) Electricians and second electricians had the second highest wages, at \$2,780 per month. Boatswains, leaders of the deck crew, earned \$2,761 per month, and stewards, \$2,701. Boatswains and stewards earned almost twice as much per month as ordinary seamen and steward assistants. (See appendix.)

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Average wages in all private industry increased by about 2.5 percent to 4 percent each year between 1987 and 1996.⁵ Among workers on deep sea freighters, surveyed wages generally showed similar increases, with a notable exception for the 1989-91 period. During this period, when average wages for all private industry increased about 8 percent, wages in the surveyed freighter occupations increased between 9 and 20 percent.

Over the entire survey period, 1987-96, wages for most surveyed freighter occupations increased cumulatively between 20 to 35 percent.⁶ There were some occupations, however, which increased considerably more than this. Chief electricians' earnings increased 41 percent from 1987 to 1996, while oilers' and diesel oilers' earnings increased 50 percent. Most remarkable, however, were the earnings of utility workers and engine utilitymen, whose earnings increased 71 percent. It should be kept in mind that some of the change in relative wages is due to the mix of ships and establishments in the survey at any given point. Occupations with few survey observations may show a greater fluctuation in average wages over time than occupations with greater numbers of employees.

Wages aboard deep sea tankers

BLS conducted surveys on occupational wages aboard deep sea tankers in November 1986, 1988, 1989, 1991, and 1993.⁷ Many of the same occupations appeared in each of these surveys. The latest tankers survey, November 1993, found that stewards, at \$2,586, had the highest monthly earnings of the occupations meeting publication criteria. Stewards assistants, however, earned the lowest average wages; at \$1,449, this is only a little more than half of the

monthly earnings of stewards. (See table 2.)

Earnings among tanker occupations increased moderately between 1986-89, generally in the 2- to 8-percent range. Increases were more substantial from 1989 to 1993, when they ranged between 5 and 17 percent. Ordinary seamen had the largest cumulative gains, 44 percent, over the 1986-93 survey compared to general vessel assistants, the group whose wages increased the least (19 percent).

Comparing wages on freighters and tankers

Freighters and tankers are different in fundamental ways. Most tankers carry one cargo: crude oil. This liquid has to be pumped in and out of the vessel. Freighters carry a variety of cargo, which traditionally has been shipped in crates and loaded and unloaded manually. It is now more common for freighter cargo to be shipped in huge containers. These containers are lifted with cranes from the vessel onto railroad cars or are attached to specially designed 18-wheel tractor-trailers. Because of the differences in the nature of the cargo that is carried on freighters and tankers, the vessels are constructed differently and therefore operated differently. Despite these differences, many of the same occupations exist on both types of ships and appeared in both the freighters and tankers surveys.

The average monthly earnings of able seamen, utility workers, wipers, cooks, stewards, steward assistants, and general vessel assistants were about the same aboard freighters as tankers⁸; their earnings differed by only a few percentage points at most. Boatswains earned 6 percent more on freighters than they did on tankers, while unlicensed junior engineers earned 12 percent more. Ordinary seamen earned 12 percent more on tankers than they did on freighters, and oilers and diesel oilers, 17 percent more.

Benefits

Deep sea transportation workers earn substantial benefits. Seafaring workers are, by necessity, at the job site for months at a time. They receive benefits in kind, such as room and board, fresh bedding, hand soap, laundry soap, modern dining (mess) halls, and recreation rooms with television sets. They also receive monetary benefits such as paid vacations and health and welfare benefits. Some BLS freighter and tanker surveys collected data on benefits as well as wages. The 1993 deep sea tankers survey found that employers paid an additional 55.8 percent of base pay into employees' vacation funds. Workers earned, on aver-

age, 19.3 vacation days for every 30 days worked. And employers contributed an average of \$49.90 per day for every day worked toward health, welfare, pension, and training plans for unlicensed employees. The 1993 deep sea freighters survey found similar results.

In addition to base pay and monetary benefits, seafarers are entitled to additional pay for overtime and "penalty" time, which occurs when work is performed outside the normal job description. Considering overtime and penalty time, the gross earnings of these seafarers could be up to twice that of their base pay.

Institutional changes

Freighters traditionally have been owned and operated by shipping lines. Parties that want their goods shipped would pay an independent shipping line to transport them. Tankers, on the other hand, have traditionally been owned and operated by the oil companies whose cargo they carried. As a result of the liability incurred in recent deep sea tanker accidents, oil companies are increasingly turning to independent shipping lines to fill their transportation needs.

America's heyday of deep sea transportation was the early half of the 20th century. The U.S. Maritime Administration reports that in 1945, there were 166,000 seafarers who sailed aboard 3,600 U.S. registered ships. Since World War II, the international shipping business—the U.S. flag fleet—has steadily given way to fewer and larger ships and companies that register their ships under foreign flags. There have been some legislated protections for U.S. shipping firms, such as the Jones Act.⁹ Despite these measures, by 1994, the U.S. flag fleet had declined to 309 deep-sea vessels, providing 20,112 seafarers with employment.¹⁰

The strength of U.S. maritime labor unions and government regulations have ensured deep sea transportation workers aboard U. S. registered ships a high standard of living. But, by using "flags of convenience," some U.S.-based companies have avoided hiring American crews, who are better paid and better organized (20 labor unions represent about 90 percent of seafarers)¹¹ than crews of foreign (usually Third-World) origin.¹²

With the increasing globalization of trade, erosion of tariff barriers, international sharing of resources, and negotiations in world maritime transportation, such as the General Agreement on Trade in Services (GATS),¹³ there is a new world order in store for deep sea transportation workers. Only time will tell how American seafarers will fare in the new global economy.

Table 1. Mean monthly earnings¹ of workers on deep sea freighters by occupation and survey year

Occupation	November 1987	November 1988	November 1989	November 1991	November 1993	July 1996
Deck department:						
Able seamen (able seamen, watch)	\$ 1,557	\$ 1,597	\$ 1,607	\$ 1,837	\$ 1,839	\$ 1,901
Able seamen, maintenance/deck utility	-	-	-	-	2,054	2,132
Boatswains (bosuns)	2,148	2,215	2,255	2,541	2,622	2,761
Ordinary seamen	-	-	1,221	1,428	1,442	1,402
Engine department:						
Chief electricians	2,186	2,306	2,377	2,636	2,787	3,072
Electricians/second electricians	-	-	-	2,627	2,808	2,780
Oilers/diesel oilers	1,329	-	1,580	1,812	1,929	2,005
Unlicensed junior engineers/QMED/ deck engine mechanics	1,831	1,920	1,989	2,232	2,332	2,444
Refrigeration engineers	-	2,195	-	-	-	-
Utility workers (engine utility workers)	1,287	1,253	1,503	1,635	2,017	2,205
Wipers	1,299	1,356	1,393	1,571	1,652	1,698
Steward department:²						
Cooks	-	-	-	-	2,066	2,148
Chief cooks and cooks-bakers	1,685	1,726	1,779	1,999	-	-
Second cooks/second cooks-bakers/ assistant cooks	-	1,642	1,699	1,976	-	-
Stewards	1,981	2,165	2,177	2,431	2,559	2,701
Steward assistants	1,089	1,075	1,201	1,390	1,400	1,446
Multiple departments:						
General vessel assistants	1,289	1,284	1,244	1,492	1,556	1,587

¹ Base monthly earnings, excluding premium, overtime, and penalty pay.

² Occupational definitions in this group changed over time. - Not surveyed.

Table 2. Mean monthly earnings¹ of workers on deep sea tankers by occupation and survey year

Occupation	November 1986	November 1988	November 1989	November 1991	November 1993
Deck department:					
Able seamen (able seamen, watch)	\$ 1,432	\$ 1,471	\$ 1,548	\$ 1,708	\$ 1,889
Boatswains (bosuns)	1,856	1,934	2,029	2,252	2,477
Ordinary seamen	1,127	1,238	1,324	1,393	1,622
Engine department:					
Oilers/diesel oilers	1,867	1,828	1,879	2,120	2,255
Pumpers	1,838	1,918	2,128	2,325	2,556
Unlicensed junior engineers/QMED/ deck engine mechanics	1,817	1,873	1,798	1,931	2,089
Utility workers(engine utility workers)	1,409	1,435	1,494	1,703	1,983
Wipers	1,242	1,241	1,346	1,530	1,657
Steward department:²					
Cooks	-	-	-	-	2,099
Chief cooks and cooks- bakers	1,595	1,622	1,693	1,862	-
Second cooks/ second cooks-bakers/ assistant cooks	1,731	1,738	1,752	1,991	-
Stewards	2,106	2,229	2,139	2,361	2,586
Steward assistants	1,062	1,122	1,187	1,310	1,449
Multiple departments:					
General vessel assistants	1,308	1,291	1,186	1,382	1,550

¹ Base monthly earnings, excluding premium, overtime, and penalty pay.

² Occupational definitions in this group changed over time. - Not surveyed.

Appendix. Occupational Descriptions

- Seamen** Performs a variety of duties concerned with the operational upkeep of deck department areas and equipment. Scales, buffs, and paints decks and superstructure; sweeps and washes deck; splices wire and rope; breaks out, rigs, overhauls, and stows cargo-handling gear, stationary rigging, and running gear; secures cargo; and launches and recovers boats. May rig and operate hydrographic and other specialty winches; handle and stow oceanographic explosives; and stage and stop beach support equipment. In addition, when assigned to watch duty, performs a variety of duties, including looking for obstructions in path of vessel, steering vessel, serving on security patrol, and standing gangway watch. Entry-level employees are normally titled "ordinary seamen," while more experienced workers are titled "able seamen."
- Boatswains** Supervises unlicensed deck personnel engaged in cleaning, chipping, scrapping, wirebrushing, and painting decks, sides, and superstructure; polishing metalwork; and operating and maintaining deck gear, safety equipment, rigging, and other equipment. Inspects and tests equipment to ensure safe and proper operation; inspects work areas and crew quarters for cleanliness. Directs securing of cargo, deck gear, and lines preparatory to leaving port and supervises handling of mooring lines and gangway when ship is docked or undocked. In addition, when assigned to watch duties, also stands at wheel or lookout, watches for obstructions in path of ship; steers ship; and directs security procedures.
- Electricians** Repairs, tests, and maintains electrical equipment, machinery, and systems such as generators, alternators, motors, and intercommunication systems. Makes inspection rounds of electrical equipment and maintains records and schedules of tasks and inspections. For wage study purposes, electricians were classified as "chief electrician" or "electrician/second electrician."
- Oilers/diesel oilers** Lubricates moving parts such as gears, shafts, and bearings of engine and auxiliary equipment. Makes scheduled rounds to observe temperature, pressure, oil level, and condition of equipment, and records data in engineering log. Duties include tending pumps, maintaining evaporators, and monitoring operation of automatically controlled boilers. Assists in transferring oil and water, and may assist in maintenance and repairs in engine room, machine shop, shaft alley, and related spaces.
- Pumpers** Operates, tests, repairs, and maintains liquid cargo handling, ballast, and tank equipment, including pumps, cargo pipelines, room heating systems, and engine department areas.
- Unlicensed junior engineers/qualified member of the engine department (QMED)/deck engine mechanics** Performs a variety of tasks connected with the maintenance and repair of engine room, fire room, machine shop, ice-machine room, and steering-engine room equipment. Inspects equipment such as pumps, turbines, distilling plants, and condensers, and prepares record of condition. Lubricates and maintains machinery and equipment such as generators, steering systems, lifeboats, and sewage disposal systems; and cleans and restores tools and equipment.

Refrigeration engineers

Maintains and repairs ship's refrigeration, air conditioning, heating, and ventilation systems. Makes periodic inspection of equipment and systems, including connected auxiliaries such as refrigerators, drinking fountains, and ice-making machines. Duties include replacing pumps and compressors; cleaning condensers and ducts; and replacing worn or defective parts. Keeps complete records on operation, maintenance, and repair of equipment.

Utility workers

Performs routine maintenance and repair work in the engine department. Assists in maintenance and repair of main propulsion and auxiliary machinery and piping. Assists in fueling ship, hooking up oil lines, and taking soundings. May perform routine maintenance of deck and galley equipment.

Wipers

Cleans machinery, decks, bulkheads, and other areas of engine room using cleaning solutions, rags, water hoses, mops, vacuum cleaners, brushes, and scraping tools. Disposes of refuse. May assist in connecting and disconnecting fuel oil and water lines and pumping up galley fuel tank.

Cooks*

Prepares or assists in preparing and serving meals. Performs a variety of galley duties, such as cutting, preparing, and cooking meats, fish, and poultry; culling, washing and cooking vegetables; preparing and serving desserts and other foods; setting-out night lunches; cleaning galley and equipment; storing leftovers; and disposing of garbage and trash. May help plan menus, or bake bread, rolls, cakes, pies, and pastries. For wage study purposes, cooks were classified as "chief cooks and cooks-bakers" and "second cooks/second cooks-bakers/assistant cooks" in the 1986-1991 surveys.

Stewards*

Supervises and coordinates activities of personnel in steward department. Performs one or both of the following functions:

1. Directs and participates in the preparation and serving of meals; determines timing and sequence of operations required to meet serving times; inspects galley and equipment for cleanliness and proper storage and preparation of food. May plan or assist in planning meals and taking inventory of stores and equipment.

2. Directs, instructs, and assigns personnel, performing such functions as preparing and serving meals; cleaning and maintaining officers' quarters and steward department areas; and receiving, issuing, and inventorying stores. Plans menus; compiles supply, overtime, and cost control records. May requisition or purchase stores and equipment.

Steward assistants*

Performs one or both of the following functions:

1. Performs a variety of the following duties: Sets out night lunches; defrosts and cleans refrigerators; cleans messroom, gear, and equipment; sweeps and scrubs messroom deck; sets and clears tables; draws stores, linen, and utensils; disposes of trash and garbage and scrubs garbage cans, cleans brightwork and woodwork, and removes grease and finger marks from paintwork; and assists in taking inventory. May clean ladders and passageways.

2. Cleans and maintains steward department areas. Makes up bunks and cleans rooms, toilets, and showers of officers and others, as assigned; cleans laundry room, refrigerated spaces, passageways, ladder wells, storerooms, linen lockers, ship's offices, and radio room; sorts, counts, stocks, and issues linens; and assists in the serving of meals in the messroom or pantry.

General vessel assistants

Performs a variety of duties concerned with the operation, maintenance, repair, and cleaning of equipment and facilities in the deck, engine, and steward department areas. Duties include scaling, buffing, and painting deck and superstructure; cleaning, washing, or polishing decks, passageways, brightwork, machinery and equipment; and securing cargo.

* Occupational definitions in the steward's department group changed over time. This appendix lists the definitions used in the most recent survey.

¹ A U.S. Department of Labor agency.

² McNamara-O'Hara Service Contract Act of 1965 (41 United States Code 351).

³ These surveys were conducted by the Bureau's Occupational Wage Program and later by its Occupational Compensation Survey program. They covered unlicensed employees on American flag vessels, excluding passenger vessels and ships operating solely on the Great Lakes or other inland waters. For the tankers surveys, only vessels of 12,000 power tons or more were covered; for the freighters surveys, only vessels of 5,000 power tons or more were covered.

⁴ Results are shown in the following publications: *Wage Survey, Deep Sea Freighters, November 1987*, U.S. Bureau of Labor Statistics, Summary, June 1988; *Wage Survey, Deep Sea Freighters, November 1988*, U.S. Bureau of Labor Statistics, Summary, June 1989; *Wage Survey, Deep Sea Freighters, November 1989*, U.S. Bureau of Labor Statistics, Summary, May 1990; *Occupational Compensation Survey: Pay Only, Deep Sea Freighters, November 1991*, U.S. Bureau of Labor Statistics, Summary, July 1992; *Occupational Compensation Survey: Pay and Benefits, Deep Sea Freighters, November 1993*, U.S. Bureau of Labor Statistics, Summary, May 1994; *Occupational Compensation Survey: Pay Only, Deep Sea Freighters, July 1996*, U.S. Bureau of Labor Statistics, Summary, January 1997.

⁵ For the 12-months ending December of each year, percent change in wages and salaries of all private industry workers; *Employment Cost Indexes and Levels, 1975-95*, U.S. Bureau of Labor Statistics, Bulletin 2466, October 1995, table 10, p. 66; *Employment Cost Index News Release*, U.S. Bureau of Labor Statistics, USDL 96-46, February 13, 1996, table 6, p. 12; and *Employment Cost Index News Release*, U.S. Bureau of Labor Statistics, USDL 97-24, January 28, 1997, table 6, p. 12.

⁶ Employment Cost Index data show a 39.7 percent increase in wages and salaries for all private industry workers from December 1986 to December 1996.

⁷ Results are shown in the following publications: *Wage Survey, Deep Sea Tankers, November 1986*, U.S. Bureau of Labor Statistics, Summary, August 1987; *Wage Survey, Deep Sea Tankers, November 1988*, U.S. Bureau of Labor Statistics, Summary, June 1989; *Wage Survey, Deep Sea Tankers, November 1989*, U.S. Bureau of Labor Statistics, Summary, May 1990; *Occupational Compensation Survey: Pay Only, Deep Sea Tankers, November 1991*, U.S. Bureau of Labor Statistics, Summary, July 1992; *Occupational Compensation Survey: Pay and Benefits, Deep Sea Tankers, November 1993*, U.S. Bureau of Labor Statistics, Summary, May 1994.

⁸ Comparing the 1993 Freighters survey results to those of the 1993 Tankers survey.

⁹ Section 27 of the Merchant Marine Act, commonly referred to as the Jones Act, states that "no merchandise shall be transported by water, or by land and water...between points in the United States... in any other vessel than a vessel built in and documented under the laws of the United States and owned by persons who are citizens of the United States..." Jones Act vessels must be crewed by American citizens or legal aliens of the United States. For more information, see "The Jones Act - Cornerstone of U.S. Maritime Policy," Internet site <http://little.nhlink.net/wgm/lca/jones.html>

¹⁰ U.S. Deep Sea Seafaring Workforce, 1000+ Gross Tons, 1945-1995, unpublished data, Office of Maritime Labor, Training and Safety, U.S. Maritime Administration, Washington, D.C.

¹¹ *U.S. Oceangoing Merchant Fleet, Operators, Crewing Levels, and Sailing Workforce, December 1995*, U.S. Department of Transportation, Maritime Administration, Washington, D.C., 1995, Union Report, p. 32.

¹² For a vivid illustration of employment and living conditions aboard ships flying flags of convenience, see *Trouble On Board: The Plight of International Seafarers*, by Paul K. Chapman, ILR Press, New York, 1992.

¹³ See Internet site <http://www3.itu.ch/MISSIONS/US/bb/wto.html#history> for information on GATS.