MECHANIZATION IN THE PACIFIC COAST LONGSHORE INDUSTRY.

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Professors Ulman and Ross:

The quoted references in this paper are public or semi-public documents. The reviewer made an attempt to let the issue rest on the known and available facts. To lend continuity and some perspective to the problem under discussion, some personally drawn inferences and interpretations were necessary in the latter part of the paper. These are based on the readings as well as on personal contacts with members of management, labor and government gained over the last 19 months through my employment with the Maritime Cargo Transportation Conference of the National Research Council.

Since the opinions expressed in this paper are not necessarily those of my employer, it is requested that they are treated confidentially.

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MECHANIZATION IN THE PACIFIC COAST LONGSHORE INDUSTRY.

I. INTRODUCTION

Traditionally in the American industrial scene, when management confronts labor with competition in form of a newly mechanized process resulting in reduced work opportunity, labor reacts by one of three defensive policies: obstruction, competition, or control. Depending on the industry and labor's attitude, the obstructionist reaction normally tended to be directed to the maintainance of the status quo. When the pressures exerted either by management or by the economics confronting the industry made such blanket opposition untenable. labor would shift its strategy to one of competing with the machine or, more commonly in recent times, attempt to control the conditions governing the employment of the new processes. Thus, to a greater or lesser extent, labor has been generally able to maintain its own interest for security during the immediate adjustment period. This is always the most pressing problem for the employee in spite of the fact that mechanization may bring possible or even probable long run benefits to the community and even the labor force itself due to market expansion. Unfortunately, in the struggle to maintain security, labor's protectionist attitude prevails often too

¹s. Slichter, p. 201.

long, sometimes for its own good. Even if the national or international union realizes the market throttling dangers of further complete obstruction, the anxiety ridden locals often will further delay a more rational labor policy. When finally a common program is hammered out, it too often happens, as Sumner Slichter indicates, that the union does "the right lithing too late".

A significant point should be made here. In the American industrial scene, the prerogative to instigate technological change rests solely with management and is rarely assumed by labor. The best known exception is probably the case of the Ladies' Garment Workers Union where, due to weak management and in order to preserve the economic survival of the industry, the union provided technological assistance to management often ended up in complete control of this phase of management.

The longshore industry presents another exception in the introduction of technological change on the American industrial st age. Here, in contrast to the Ladies Garment industry there exists a large, powerful and financially rather stable management steeped in the tradition of absolute control. During the last twenty five years, a militant and

² S. Slichter, p. 203.

resourceful labor movement has grown in importance so that today they hold the balance of power. Management in the majority seemingly has never fully accepted this shift of power. "Progress" has therefore too often meant dreaming about a return to the "good old days" before labor had a voice, rather than a realistic adjustment and growth using technology and management's bargaining power. The result has been almost complete stagnation probably unparalleled by any other world-wide industry of its size and financial resource. Some other causes contributing to this state will be discussed later in this paper. With the growth of the trucking industry, the competition of the railroads. and even the future emergence of the airplane, the shipping industry finds itself in a position where much of its past market is unrevokably lost. The decimation process is continuing and the industry's survival is at stake. Pressures for change are being exerted by government with threats of reducing the subsidy structure, so that slowly management and labor find themselves in an untenable situation.

This paper will attempt to define in some detail this problem confronting the industry and then describe the recent management attempts to arrive at a solution by bypassing labor, the labor reaction and finally the cooperative approach which is presently under discussion at the bargain ing table in San Francisco.

II. THE INDUSTRY

No attempt will be made to describe the historical background of labor-management relations in the Pacific Coast Longshore Industry. This area has been well described by Betty Schneider; Wytze Gorter; R. C. Francis; the San Francisco Bay Area Council and others. These references are listed in the bibliography. Rather an attempt will be made to give some insight into industry problems relating to the topic of this paper by summarizing trend data describing the market, the management position, and the labor force.

A Note on Statistics used in this report and on cargo measures. Anybody attempting research in the maritime industry finds himself confronted with the potential availability of a multitude of statistics from many public and semi-public sources, and with the difficulty of extracting congruent information from these statistics. This reviewer has not been any lucker. The reasons are many. The most apparent reasons seem to be: lack of uniformity in accounting procedures by the members of the industry and, even more important, lack of uniformity of measures.

In the maritime industry, dry and sometimes liquid cargo is measured by any one of four types of tons, depending on the tradition, preferences, or statistical advantage gained by each company. The four types of tons are:

Short Ton -- 2000 pounds

Long Ton -- 2240 pounds

Measurement Ton -- 40 cubic feet (volumetric measure)
Revenue Ton -- can be any of the above three, depending

As a general rule dense items are listed by the long or short ton, and light items by the measurement ton. In published data, when no reference is given, the author assumed that a long or short ton was used as a base. The difference between long and short tons is not significant for this paper since the comparisons and conclusions to be derived therefrom are not sensitive to a 10% level of difference.

While this paper is interested in a coastwide problem, much specific data is available only for the San Francisco Bay Area. Such Bay Area data is then presented under the assumptions that its characteristics are proportionately similar to Pacific Coast data.

A. The Market

The Pacific Coast serves as terminal for the following trade routes:

Intercoastal (to the Gulf and East Coasts)
Round-the-world
South Sea Islands, Australia and New Zealand
Pacific Far East
West Coast of South America incl. Central America
East Coast of South America incl. Central America
and Coastal (serving ports of the Pacific Coast only)

Table 1.

Foreign ship-borne trade for the year 1955

	Million Tons Dry Cargo	Value of Shipment Million \$
All US shipments	121.3	18,787
Pacific Coast	10.4	2,226

(US Dept. Commerce, Maritime Administration, Essential US Foreign Trade Routes, Government Printing Office, Wash. DC, 1957).

The above table does not include non-contiguous (mainland to territories), intercoastal, coastal dry cargo. Adding these tonnages for 1955 yields a total of 23.5 million tons by 1956. Table 2 shows these tonnages for the San Francisco Bay Area and compares the shift between these trades from 1925-40 to 1949. Similar data for the period after 1949 or for the whole Pacific Coast has not been published in summary form.

Table 2.

Dry Cargo and Petroleum Tonnages (All Trades)
San Francisco Bay Area

	1925-40 (average) (1,000 tons)	1949 (1,000 tons)
Total tonnage moving	24,360	23,411
Dry Cargo Total Foreign Non-contiguous Intercoastal Coastwise	7,690 2,205 1,273 2,012 2,200	5,090 2,281 1,309 1,027 473
Petroleum Total Foreign Noncontigueus Intercoastal Coastwise	16,760 1,351 322 301 14,696	18,321 606 756 224 16,735

(Ref: Senate Fact Finding Committee, "Ports of San Francisco Bay Area" California Legislature, 1951, p. 192).

Table 2 indicates two significant facts for the Pacific Longshore Industry. There has been a very significant reduction in coastal and intercoastal traffic for dry cargo. Tanker Traffic is the predominant traffic in Northern California, but since it accounts for very little, if any, of the longshore employment, it is not of interest to the subject of this paper. The same relationships hold true for Southern California.

Intercoastal tonnage for select years for Pacific Coast ports is given below:

Table 3.

Intercoastal Tonnage - Dry Cargo

Year	All Pacific Coast Ports (1000 short tons)	San Francisco (1000 revenue tons)	Oakland (100 short tons)
1930	Not available	1,355	411
1935	n n	1,552	435
1940	6,979	1,262	568
1946	2,485	430	523
1948	3,051	520	525
1950	Not available	685	596
1951	Ħ Ħ	626	566

(Ref: Pacific American Steamship Assn. circulat 150-50, as well as Annual Reports from the Harbor Commissioners, San Francisco & Oakland)

This table indicates the significant drop in intercoastal cargo from pre-World War I^I to post-War period which did not recover, even during the Korean War period. Oakland data is included to show that San Francisco's loss did not shift to the East Bay.

The loss in traffic over the same period is even more significant for the coastal trade as shown by table 4.

Table 4. Coastwise Tonnage (Dry Cargo)

	All Pacific Coast Port (1000 short tons)	s San Francisco (1000 Rev. tons)
1930 1935		2,015 1,518
1940 1946	3,378 260	757 104
1948 1950	447 640	50 151
1951	Not available	129

Ref: Same as for Table 3.

This loss in coastwise and intercoastal traffic is due partially to the fact of the growth in traffic through the Gulf Coast which increased its share of total U.S. coastal and intercoastal trade from 16.5% in 1925 to 31.6% in 1950 while the share of the Pacific Coast dropped from 32.2% in 1925 to 22.0% in 1950. (Comparative figures for the Atlantic Coast are 51.2% in 1925 and 46.4% in 1950). This means that some of the trade from the Southwest which formerly came to the Pacific Coast for shipment now goes to the well developed Gulf Coast ports. By far the biggest loss in coastal and intercoastal traffic was naturally to other forms of transportation, trucks and railroads. In foreign trade the traffic share of the Pacific Coast remained fairly constant.

The loss in ship-borne freight traffic can be more

¹ Annual Report, Chief Engineers, US Army.

dramatically represented when comparing the tonnage against the growth in Gross National Product. The underlying assumptions are that 1) the manufacture and use of goods remained a relatively constant percentage of GNP over the examined period and 2) that the transportation need is a constant function of the manufacture and use of goods. This comparison is shown in table 5.

Table 5.

Year	GNP Constant \$ (Endexed)	Tonnage (Dry Goods) San Francisco Bay Area Ports (Indexed)
1930	100	100
1935	95	93
1940	136	93 102
1945	220	168
1950	198	126
1950 1956	300	160

Ref: US Maritime Commission, Report 317
Reports, State Board Harbor Commissioners, San Francisco
PMA Research Report, 15 May 1957
Economic Report of President (US) Jan. 1950
All Reports processed by author for common denominators.

A last indicator of changing market conditions often used is the number of arrivals and departures of ships. Table 6 lists this indicator with the tonnage potential of these ships.

Table 6.

Number of Ship Arrivals and Departures and Registry Tonnage
San Francisco Bay Area.

Year	Number of ships	Total Registered Tonnage of ships in Col. 2 (in million tons)
1930	14,702	38.4
1935	11,880	34.8
1940	8,360	28.2
1945	6,998	30.0
1950	8,001	38.4
1952	9,859	46.2

Ref: San Francisco Marine Exchange Records.

This table indicates that while the number of ships arriving and departing has significantly decreased since 1930, the tonnage capacity of the ships has been increased at a greater rate so that the tonnage potential as a whole has increased. The overall freight reduction must therefore result in ships which are not full.

General Cargo over the past twenty years has been decreasing in density so that today ships hauling dry general cargo (cargo packaged, not in bulk form) are much more frequently cube full with spare weight capacity rather than the opposite.

For later use, the total dry tonnage through Pacific Coast Ports with breakdown by type is shown in Table 7.

Table 7

Tonnage Handled Through Pacific Coast Ports by Type (in 1000 tons)

Year	Total	General Cargo	Grain	Other Dry Bulk	Lumber	Northern Calif. Total
1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955	21,401 14,839 21,008 14,599 17,401 19,458 25,174 24,782 23,323 20,562 23,517 27,364	10,706 12,383 15,269 17,343 15,364 16,434 13,959 16,050 16,038	539 1,791 1,140 2,715 3,765 2,105 1,843 2,661 5,404	2,023 1,913 1,723 3,342 3,885 2,890 2,605 2,605 4,346	1,332 1,313 1,327 1,775 1,768 1,894 1,755 1,871 1,576	9,693 6,959 9,120 5,975 6,044 7,270 9,638 9,491 8,077 8,943 9,435

The above table shows the great yearly fluctuations with possibly minor long term upward trend in total cargo up to 1955. No significant shift in type of cargo is apparent. The sudden increase for the year 1956 seems to be due to grain and other dry bulk materials and must await future years for trend evaluation. The Northern California total seems to be lacking any trend. This seems to be in agreement with table 5.

B. Management

Management, at the time of writing this report, consists in the San Francisco Bay Area of 86 steamship companies or their agens. Various other Pacific Coast ports are serviced by an additional 15 steamship companies which are not represented in the Bay Area. In addition to the steamship companies management is composed of the stevedoring companies, of which there are 23 in the Bay Area. With some exceptions, the most

notable being Matson, the steamship companies do not hire directly the longshore labor, but hire a stevedore on contract to perform their cargo loading and discharge operations The stevedore then in turn hires the necessary labor on a daily base to perform his cargo handling. steamship companies however do often hire clerks and Longshore supervisors (called walking bosses) on a daily, weekly or monthly basis directly from the labor union. For contract negetiations, administration and labor research practically all management on the Pacific Coast is a member of and is represented by the Pacific Maritime Association which grew out of the Waterfront Employers Association and the Pacific American Shipowners Association in 1948. While management thus forms generally a common front on the bargaining table. internal cooperation is not always the rule. Because of old traditions and an inherent feeling of competitiveness, management is often suspicious of one another which at times can lead to an unwillingness to tackle common problems together because each party is afraid to contribute essential data necessary for the analysis of mutual problems. This attitude prevails particularly between various stevedores. Very few of them are willing to give their customer steamship company the opportunity to compare their own operations with that of other stevedores, lest their competitive position be jeopardized.

The average number of ships belonging to the member companies of PMA in operation is shown below:

Table 8

1950 198 1952 (Korea) 288	ear)
1952 (Korea) 288 1954 165 1956 169 1957 (Jan-Mar) 196	

To this total must be added a relatively small number of Navy Cargo Ships (MSTS) which are also generally loaded by PMA stevedoring companies, even though the Navy is not a member of PMA. An exception to the above is the operation at the Oakland Naval Supply Depot which uses predominantly its own civil service longshoremen except when under heavy demand factors ILWU longshoremen will be called in. In that case the longshoremen however will still be managed by the Navy acting as its own stevedore, obeying the PMA contract.

To evaluate the potential loss in revenue to the shipping industry incurred from the loss in tonnages listed in the Market section of this report, the Senate Fact Finding Committee in Op. cit. p. 365 hists an average revenue per ton of \$20 in intercoastal and \$12 in coastal trade. Since these are 1951 figures, a fluctuation of 10-20% seems indicated. Using these figures with the loss of coastal and intercoastal tonnage listed in table 2, yields a revenue loss for the San Francisco Bay Area alone of \$40.4 Million, or approximately \$120 Million for the Pacific Coast as a whole. Some of these losses have been compensated for by

an increase in liquid bulk cargo, but, as stated before, this is of no aid to the longshore industry since liquid bulk handling does not require longshore labor. Similar reasoning also applies to the fact that all ship-born traffic losses have been taken up by other transportation industries, primarily trucking and the railroads. This specifically is the problem facing the longshore industry.

C. Labor

Longshore labor on the Pacific Coast (with few exceptions in the Pacific Northwest and Alaska) is represented by the International Longshoremen's and Warehousemen's Union (ILWU). The ILWU was organized during the 1934 Longshoremen's strike in San Francisco and has in the past been affiliated with the International Longshoremen's Association (ILA), and later the CIO from which it was expelled in 1950 for political reasons. Today it is an independent union. The ILWU so far has organized only shoreside labor although the temptation to extend their jurisdiction to off-shore labor may have been high during their many disputes with the Sailor's Union of the Pacific. Of the many shore-side operations falling within the jurisdiction of the ILWU, on the Pacific Coast, this paper is concerned only with the work performed by Longshoremen, Ships Clerks, and Walking Bosses. Longshore work is defined as:

... applying to all handling of cargo in its transfer from vessel to first place of rest, and vice versa, including sorting and piling of cargo on the dock, and the direct transfer of cargo from vessel to railroad car or barge, or vice versa when such work is performed by employees of the companies parties to this contract. (ILWU-PMA Pacific Coast Longshore Agreement, p. 4).

Ships clerks work consists of receiving, identifying and counting of cargo in the shed or other first place of rest and the release, identifying and counting of cargo from the first place of rest to the ship when loading, or vice versa, as well as the break-down and accounting of hours (time-keeping) spent by the longshore gang on the ship.

The Walking Boss, while a member of the ILWU, is actually the representative of the stevedore aboard ship charged with the operational supervision of a number or all longshore gangs aboard a ship. The utilization of walking bosses is not uniform on the Pacific Coast. companies are several walking bosses plus a senior walking boss called Superintendent of Cargo or Supercargo in charge of all loading or discharge operations. Other companies, such as Matson, use only one or two Walking Bosses as the senior management representative. Walking bosses, like clerks, can be hired permanently or on a monthly or daily The significant work characteristic for ships basis. clerks and walking bosses in this discussion is the fact that their work opportunity basically changes in the same proportion as that of the longshoremen as a result of shifts in the market or work organization, which includes mechanization of cargo handling.

Employment.

The total number of longshoremen in California, Oregon and Washington listed on the PMA records as having been on the payrolls at least one week during the first quarter of 1957 is 13.754. Due to the casualness of longshore labor, and the various categories of union membership, most awailable labor data is in manhours broken down by type of work and type of union membership (registered or casual). The number of registered union members, is controlled by ILWU-PMA agreement in such a way that the market can satisfy full employment (at least 40 hrs/week) for these registered members with high reliability if they so desire. The slack is made up by a reserve of non-registered workers called casuals. In the clerk's locals, registered membership is subdivided into Class A and Class B. Class A has priority on employment. Promotion from class B to A is by seniority. No data indicating this total classification breakdown for the Pacific Coast is available to the author. Tables 9 and 10 indicate longshore employment variations and the total employment breakdown for one year.

PMA Research Report 1957.

In the S.F. Bay Area registered longshore membership during 1957 was 3798. The number of casuals who worked at one time or another during 1957 was 6846. The number of registered clerks in 1957 was 708. There seem to have been no casual clerks during that period.

Volume of Longshore and Shoreside Employment
(in thousands of man hours)
1948-1957

Year	Shoresi	.de	Longshore	ŀ
	Pacific Coast	Northern Calif.	Pacific Coast	No Calif
1948	17,769	8,082		- <u>3,</u> 3. ♦ 1, 1, 2
1949	18,085	7,078		काम्युर स्थापन
1950	24,397	8,894		
1951	28,096	10,551		
1952	26,833	10,885	20,461	8,866
1953	27,057	10,903	20,729	8,817
1954	26,433	9,573	21,014	7,632
1955	27,295	9,888	21,572	7,790
1956	28,719	10,638	22,299	8,187
1957	N.A.	10,663	ŇA	7,997

Ref: PMA Longshore Review 1957.

Category

Table 10

Breakdown of Shoreside Employment Northern California, 1957

Total	10,662,886	
Registered Longshore Non-registered "	7,240,100 746,402	

Non-registered " 746,402

Registered Clerks 1,460,815
Non-registered " 351,875

Registered Misc. (Watchmen, mechanics, etc.735,739
Non-registered " 127,955

863,694

Manhours

Ref: Non-published Data, Maritime Cargo Transportation Conference.

Table 9 shows that the increase in shoreside labor of app. 2 million manhours per year between 1952 and 1956 is almost solwly assignable to longshore labor increase. The net loss in Northern California is compensated for by a gain in Southern California, Oregon and Washington, with the latter alone gaining 1.3 million manhours. Table 10 indicates that the shoreside manhour distribution in Northern California was 68% for registered longshoremen, 13.7% for registered clerks 7% for non-registered longshoremen, 3.3% for non-registered clerks, and 8% for miscellaneous labor of which 6.9% was ILWU registered. In other words 81.7% of all shoreside work was accomplished by registered longshoremen and clerks, and only 10.3% by casual longshoremen and clerks. Wages

The current straight time hourly wage is \$2.63 for longshoremen and \$2.79 for clerks. The average shift length is 8 hrs.. During the depression period in order to distribute the work to more members, contract provisions were instigated calling for a 6 hr. day with overtime after 6 hrs. for long-shore work. This provision has never been rescinded. For an 8 hr. day, the average hourly wage for longshoremen is therefore \$2.97. Fringe benefits (Insurance, Pension, Vacations, Welfare) add another \$1.41 to the longshore wage and \$0.60 to that of the clerks. To this must be added skill differentials, penalty pay for particularly odious tasks, travel allowances when working at distant piers, etc.

An interpolation for weekly and annual earnings for longshoreman has been made by PMA as follows for the first quarter of 1957:

Table 11

Total Number Average projected of Earn. Rate Hr/wk ave. earnings men (000)p.Hr. weekly annually 13,754 \$19,647 \$3,33 33.0 Pacific Coast \$109.89 \$5,714.28 7,279 North. Calif. 5,088 3.34 32.9 209489 5,714,28 Ref: PMA Longshore Review 1957

No equivalent average earning breakdown is available for clerks. To correct the above figures for the 1958 rate increase, the projected earnings should be increased by 3.0% making the weekly earnings \$113.19 and the annual earnings \$5,885.71. The above figures are however not too indicative because the number of men has not been broken down into registered and non-registered. If such a breakdown were made, the average projected earnings of the registered men would probably increase significantly, while that of the non-registered work force would experience a There are furthermore significant similar decrease. variations between the earnings of the various registered longshoremen since they have a considerable freedom in the number of hours they desire to work and, to a lesser entent, over the jobs they will accept. When comparing longshore basic wage increases against increase in consumer price index the following comparison can be made:

Table 12

Consumer Price Index vs.

Longshore Base Wage (Pacific Coast)

•	1947-49	1950	1957
Consumer Price Index	100	102	118
Longshore Base Wage	100	108	144

During the period of 1950-1957, fringe benefits for longshoremen also increased by 155%.

(Ref: PMA Contract data and Bureau of Labor Statistics.

Table 13

Comparative Weekly Earning
US Industry Workers and SF Bay Area Longshoremen

Industry	Ave. Weekly Earnings		% Increase since 1948
	1948	1956 *	1956
Metals (Prim)	\$ 61.03	99.66	63.6
Printing	66.73	95.39	42.9
Petroleum	69.23	105.11	51.8
Machinery	60.52	95.02	57.0
Metals (Fabr)	56.68	89.22	5 7∙ 4
Dhemicals	56.23	88.39	57.2
Food	51.87	78.00	50.4
Misc. Mfg.	50.06	72.19	44.2
Textiles	45.59	59.93	31.5
Apparel	42.79	53.55	25.1
Railroad	60.34	88.21	50.5
Bay Area Long-		109.89	59.4
shore			

Note: Seemingly US average rather than West Coast averages.

Reference: Data compiled in PMA Longshore Review 1957 from PMA payrolls and Bureau of Labor Statistics.

The author realizes that all data on Longshore earnings and data comparisons are extracted from employer's records and research reports. The obvious reason is availability. Labor easily concedes the basic validity of most of this data, and in fact is proud to have achieved such an excellent comparative wage position in US industry.

As a summary on wages it can be stated that the earning potential and realization of the Pacific Coast registered longshoreman compares favorably with that of other industries. The same applies to ships clerks.

The author personally met a number of clerks whose earnings per year averaged \$8 - 10,000. Admittedly these men often worked 6 days a week and some of them at night. A clerk in demand as a supercargo can however average up to \$10,000/year or even higher. Today the ILWU waterfront worker, while still militant in demands for increased benefits, has a considerable economic stake in the continued existence of his industry. With almost guaranteed work opportunity for the registered work force the basic casualness of work existance has disappeared in all but in name, so that in reality the waterfront worker more and more assimilates the social and economic characteristics of his industrial counterparts. It is for this reason that the problems of the industry, to be discussed in the next chapter are equally his problems. In fact, at times, he seems more eager to find a solution which will assure the industry's and therefore his survival than some of the management parties within the industry structure.

III. THE PROBLEM

Traditionally ocean transportation has been the cheapest mode of transportation available. No other carrier can accommodate such a variety and quantity of goods and carry them at an equally low cost over long distances.

If it is assumed that the manufacture of goods rises in proportion to the Gross National Product, and that therefore transportation of goods also should rise in equal proportion. Tables 5 and 7 indicate that the maritime industry has not received its share. Tables

2, 3, and 4 further indicate that coastal and intercoastal tonnages have not only not increased, but have actually significantly decreased over the last 20 years. It is therefore only the import-export shipping (7% of GNP), and primarily the military and government sponsored freight which has held up the dry goods shipping industry and has given it a slow total increase.

The reasons for the relative loss are apparent. The competitor is time, and time has value. Time is lost in two ways in intracontinental shipping. First, the route which a ship must follow is generally longer than that for an overland carrier. This is particularly apparent for intercoastal transport where the ship route passes via the Panama Canal. In addition, a ship in order to operate economically, must be loaded close to capacity. To collect a several thousand ton capacity load most ships must collect as well as discharge it in several ports. During these waiting times cargo is in-transit inventory and represents unused investment. Neither of these problems confront with anything near equal force the railroad or the trucks. A railroad car or truck has relatively low unit loads and can therefore usually be taken by near-direct route to destination.

Costs have also in other ways added increasing burdens to the shipping industry. As the Investment for

an average freighter rose from \$2-5 million pre World War II to the present \$8-12 million. The resulting amortization charge rose to a present \$4000 - \$40000 per day in port. Ship loading and discharge methods and hence productivity in the main have not changed appreciably over the last 30 or more years, while labor costs have soared. The accumulation of these costs have decreased the savings potential of shipping over the railroads and/or trucks.

The result, as would be expected, is a lesser share of the market, less profits and, in the long run, less employment. This economic shift would have had even more drastic effects on the industry were it not for the support pillar of the majority of US shippers in the international trade, which often also carry coastal and intercoastal trade, the government subsidy. Unfortunately this support has given a false sense of security to much of the shipping industry, permitting potentially more vigorous drives for changes to reamin dormant. It seems however that the Commerce Department is beginning to review with greater alarm the present structure of the shipping subsidy with intent of potential changes which, it is hoped, will force the industry to a more searching self-analysis, and what is more important, new measures of self-help. For this purpose the government has started in May 1959 the formation of a review committee under the chairmanship of a Mr. Erpf (a New York investment banker). The primary

function of the Erpf Committee is to make recommendations leading to an eventual reduction in subsidy rates.

Why has this industry been dormant in comparison to any other US industry of equal size and equal national importance. There are very many reasons but some stand out.

The maritime industry is a very old, well established industry with centuries old traditions. Ownership and management until just recently was more often founded along family lines rather than on public ownership and professional management. Innovation and improvement of ship operations has predominantly been done by naval architects and engineers emphasizing almost solely design for ship stability, seaworthiness and speed rather than for cargo handling characteristics. Ship performance at sea today has reached a high degree of optimalization, so that further increases in size or speed for example only tend to increase the total economic cost of the operating system based on present types of cargo. In contrast, cargo handling, with minor exceptions, has not changed significantly over the last 40 years or even The few significant changes are in the use of bulk more. shipment wherever possible, (up to 30% of total dry cargo, see Table 7) and the recent trend to large-scale containerization which however is only marginally applicable.

Economic operations to management therefore mean generally two conditions:

a) high cargo handling productivity, which because of predominance of general cargo (70% of total dry cargo) still means generally performing hard manual labor at high

speed;

b) low ship waiting time in port (for gangs) which means the availability of a large labor force.

Unfortunately the goals of labor are just the opposite of the above mentioned ones. Since labor believes strongly in the inelasticity of its demand due to a fixed work lot theory, the available work should be stretched. This is accomplished by numerous contract provisions providing for fixed gang sizes, fixed sling loads (the amount of cargo which can be taken into the ship with each travel of the loading hook), generous relief system, etc. These provisions reduce productivity potential. In all fairness it must be admitted that these measures are necessary for safety and health of the workers. An argument however could be made over the magnitude which has been defined for these controls in the contract.

Because of the fluctuations in work load and the need to preserve adequate work opportunity for its regular work force, labor also tries to maintain as low a permanent work force as possible, even if it means at times a good number of ships awaiting service. A recent example is the Long Beach fiasco, where during April-May 1959 some ships had to wait over one week for gangs so that management finally was forced to divert ships to other ports.

It is this conflict between the two main operational objectives of management and labor, superimposed on a still more or less smoldering hostility and mutual distrust

which is the basis of today's operational stagnation.

The effect is that ship-in-port costs percentage have steadily increased so that today about 50% of total ship operating costs are absorbed during the stay in port (cargo handling costs, ship burden and the minor port charges).

Fuel, ship burden at sea, ships crew, wages make up the other 50% of total ship operating costs. A ship naturally earns no revenue while in port.

Management has at times tried to prove that the labor productivity is steadily decreasing inspite of the investment of some marginal new equipment. For this purpose, management in 1940 hired the accounting firm of Price, Waterhouse, & Co. to prove that productivity has decreased. Labor has generally been able to refute these and other management statistics since neither sample size nor control of comparative populations of cargo had been based on adequate statistical methodology. Labor in turn accuses management of attempting a speed up with equally convincing arguments. The Arbitrator Wayne L. More ruled that the diversity of methods used in collecting the productivity data from which the Price Waterhouse study was compiled created grave doubts as to the value of the study. A good summary of the arguments on productivity changes and the

In re International Longshoremen's and Warehousemen's Union and Waterfront Employers Assn., involving Union Demand for Increase in Wages, Dec. 1950, Evidence, Vol. '', p. 80.

problems of validity is given by Schneidet and Siegel in their op. cit. p. 52, 53. Labor traditionally in this industry has sought to protect its position on a day to day basis, with little regard to the long range effects. In this respect labor has been successful. Lately however, labor on the Pacific Coast has privately indicated concern about the long range future of the industry and has indicated an interest in some change and rejuvenation. Such changes labor maintains, must be originated by management, but maturally must not be created through a "speed-up" or be in any other way directly harmful to the health or safety of labor. The reluctance of management to undertake revolutionary changes can be explained by indifference and/or fear.

Indifference operates at two levels. The first one, as previously mentioned, is fostered by the security given to many lines by the operating subsidy. The second and more insipious one rests in the role of the stevedore.

The stevedore as described in section IIB is a member of management, whose immediate interests are often opposite to that of the shipping company, unless the stevedore and the shipping company are the same as at Matson. The stevedore as the contract cargo handler usually contracts on a fixed rate per ton by type of commodity. Contracts are often renegotiated if the stevedore either looses money because of changed conditions, or, in some instances has It seems apparent that labor is too strong to be pushed into a "speed-up" and that such a potential would yield only marginal increases. Why has management not followed the lead of other industries into a complete systems change?

a higher return of profit than originally calculated.

Thus in effect, most stevedores operate on a cost-plus basis. The lower the cost, the lower the plus. Therefore it is of no direct advantage to most stevedores to see productivity climb excessively in the short run and too many stevedores are not worried about long term effects.

Fear also operates at two levels. The more direct one is an economic fear that either the considerable investment necessary for total system change can not be returned through the potential increase in profits, or that once the investment is made, labor will refuse to operate the equipment with less manpower. Both possibilities have been proven right in some instances and will be discussed in the next chapter.

The other fear is a very common one. It is the fear that a change may make the present manager obsolete by imposing new tasks and planning responsibilities upon him which technically he feels insecure to handle with equinimity. While this fear is found in most if not all industrial situations it is seldom as predominant as in sh ipping according to some investigators in the maritime field.

This is then the problem: a need for change recognized by labor and management alike, and an inability for reasons mentioned to undertake that change. It is the result of this balanced reluctance which permitted Schneider and Siegel to state in their 1956 study:

So far as productivity and efficiency are concerned, neither party has shown a desire to embark on the elaborate studies necessary before effort could be made to reduce costs substantially in this area. (Only) certain isolated actions indicate a more constructive approach. (Schneider and Siegel, op. cit. p. 85).

IV. POTENTIAL SOLUTIONS

The previous chapter discussed the forces of fear and indifference operating at the same time within management and labor which so far with few exceptions have prevented a concerted effort by either side to a new solution to the economic problem facing the industry. Chapter III also indicated some recognition by the two parties, enforced by recent murmurs from the Dept. of Commerce, that the 'status quo' can not endure much longer. With this possibility in mind several independent shipping lines as well as a few non-subsidized operators have attempted a break-through.

A. The Management Break-thru.

The earliest system changes were the successful attempts to specifically design cargo ships for a single commodity. The best known examples are the dry bulk ships for cement, sugar, copra, ore, grain, etc. By using specialized loading and discharging equipment such as blowers, pumps, or continuous conveyors, such application where the volume warranted such expenditures brought about tremendous improvement in productivity. The application of this potential, as shown by table 7 has stabilized at about 20-30% of the total dry cargo passing through Pacific Coast ports.

Another cargo handling change which has been tried with moderate success by a number of companies is the palletization of uniform cargo such as cartons of beer, canned goods, paint etc. The objection to this change by some operators is the loss of cube, the cost of the pallets which are either lost at the destination or often have to be returned empty, and the fact that with the present gang size and load limits as specified by contract the full potential of the labor saving is not realized.

Partially in order to overcome these gang size and utilization restrictions of the present contracts, some companies have felt that a solution lies only in such a complete systems change that by forces of reason and/or public opinion, labor could not justify its present position, or that labor would be almost completely by-passed. The search for such a systems change has led to the adoption of large size containers. Containers are large boxes, made of metal or wood, capable of carrying many times the presently specified single hook load all at once. containers, called Sea Vans, have been used for a long time primarily to carry household goods. As such they carried much cube, at low density (up to 400 cubic feet and up to 4000 pounds). They are stowed in conventional cargo spaces. The new philosophy suggested even larger containers, up to truck-trailer sizes and weight capacity up to 20 short tons. In order to easily accommodate these large units special ships had to be designed. The two predominant designs were called Roll-On Roll-Off (RO-RO) and Lift-On Lift-Off

(LI-LO). The RO-RO design presumed that truck-trailers would be driven directly into the ship via special ramps; the power unit would unhook; and at destination a new power unit would move the trailer from ship to receiver. The LI-LO design was to make use of special ship or pier mounted cranes lifting the container without the trailer into vertically subdivided ship holds. Both systems have some severe limitations. They require very significant investments (ships, pier facilities, containers) at all ports; they presume a well balanced trade or considerable empty container movement; and finally sufficient large shipments from point to point to warrant filling one or more containers. Both systems induce from 3045% loss of cargo space. These limitations have so far prevented a more general acceptance of these possibilities. There are no RO-RO ships in use at the moment. Trailer-Marine-Transport Co. operated one RO-RO ship, the Carribean Queen from Florida to Puerto Rica, but the ship broke down at sea, and the company was forced to sell it to the only bidder, the US Government which will use it for military evaluation. The same company also shipped trailers in surplus LST's towed by a Moran tug, but this venture failed. LI-LO trials have been more successful. Here on the Pacific Coast, Matson has so far invested over \$5 million in converting 5 of their West-Coast Hawaii freighters so they could carry containers on the top deck and in buying several hundred containers and trailers as well as installing a 50 ton capacity crane

at Encinal Terminals, Alameda, Calif. Matson is in a particularly favorable position for this method of operation because of its two terminal trade route, Bay Area-Hawaii. Empty container return, except for the handling cost, offers no problem since the ships are only partially filled anyway. Matson intends to expand this system by purchasing even more containers, setting up facilities in Los Angeles and remodeling several of their ships for all container cargo. Matson has reason for optimism. Their present container cargo loading shows an improvement of over 2000% over conventional cargo loading. The fact that the containers are merely placed on deck must be taken into consideration however.

The only other known US company specializing on container movement is Pan-Atlantic operating from the East Coast. Other companies, such as Pacific Far East, American President Lines, US Lines etc., are using containers in moderate quantities, but at present have not made any effort for specialization, thereby losing most cost advantages since containers are particularly difficult to stow in standard cargo spaces. They also often need special rigging of the existing ships gear to life such weight safely, thereby losing inordinate amounts of time. The limitations previously indicated at present still make a general shift to container operations unfeasible for most companies and trades. In one of their research system studies the Maritime Cargo Transportation Conference of the National Academy

of Sciences has calculated the exponential relationship in productivity improvement which containers have to yield in order to make them economically comparative to standard shipment of dry carge, called "Break-Bulk".

This, as yet unpublished study, roughly indicates that a productivity improvement of about 100% in present systems would make most present container operations economically unfeasable.

B. Early Labor Reaction, and Interim Attitudes.

The introduction of increased bulk shipments was a very gradual process following the well established shipment of such bulk products as coal, ore etc. Since the commodities which can be bulk shipped are somewhat limited in number and since precedence has been well established, labor seemingly has not considered it a challenge to their existence. Labor's attitude was therefore to merely bargain for the maximum number of men which could be assigned to the various bulk handling operations. As an example when copra bulk handling was introduced, management sought to reduce the labor requirement to 4 men from the previous 65 longshoremen per ship. Labor was able to win a concession in the utilization of 9 men.

The picture changed however with the introduction of pallets, containers, and semi-automatic package conveyors. Here the first labor reaction was 'job protection at all costs'. For pallets this seemed to create less of a

conflict with management opinion since pallets generally are used sporadically, intermixed with unpalletized loads. The same number of men stayed on the job, at best watching the fork lift driver handle the pallets in the hold of the ship all by himself. Productivity generally increased somewhat for palletized operations, even when the rate of operations was labor controlled. Unpublished data collected by the Maritime Cargo Transportation Conference in the Bay Area indicate a productivity increase of from 100% to 175% over the same commodity stowed "Break-Bulk".

The Introduction of containers and conveyors brought the conflict between management and labor into the open with neither side willing to concede. Management had staked their investments on the assumption of significant productivity improvements which are necessary to realize a return on the investment. Labor realized that the labor saving potential inherent in the new systems was a significant threat to undisturbed existence, which when realized by many companies could seriously cut the need for long-shoremen, ship clerks and union supervisors.

The East Coast ILA decided to meet the issue head on. On November 18, 1958 it called a 6 hour work stoppage for a general meeting of its 17,500 longshoremen and allied crafts to "discuss" union measures against the growing spectre of mechanization on the waterfront and the threat it posed to their jobs. The immediate cause of this action was the

introduction of new semi-automatic conveyor systems by Grace Lines, which the operator maintained required gangs of six men instead of the usual 21 man gangs. The existing contract, valid until September 30, 1959 provides for gangs of at least 20 men, but allows for arbitration by the chairman of the Joint Laber Relations Committee of disputes that arise over new situations. The accounts of the tenor of this meeting vary. The New York Times of 19 November 1958 indicates on page 1 "About 17,500 longshoremen roared their approval yesterday of their union's demand that the clock be turned back on waterfront automation." The same paper reports on p. 27 from a speech delivered for Mr. Gleason (International Organizer of the Union) where he indicated a policy that management will have to share the benefits of automation with the displaced workers, and that until such an agreement is worked out the "status quo of Dec. 1, 1956 will remain in effect". Mr. Gleason was also reported to have stated: "we are prepared to sit down now with the operators (to) start working out these problems" but that such discussion would not be carried out through the Joint Labor Relations Committee which is part of the port grievance machinery. Later the same month the ILA refused to handle containers for the US Lines and Grace

l New York **Times**, loc. cit.)

since no new agreement had been as yet developed for these new methodologies and that management was purposely introducing these methods to create a pre-existing condition. The arbitrator Burton Turkus ruled the ILA in error, even though the union stated that the issue is not an arbitratable one. The ILA then yielded with the proviso that it would handle containers and other mechanized devices in use when the last contract was signed but would not accept the introduction of new methods without a new agreement, a reiteration of their November 18 position.

On the Pacific Coast a similar interim attitude developed, In fact, it has been the ILWU on the West Coast which has been the setter of a more moderate philosophy towards what the Union often prefers to call automation. The ILWU started as early as summer 1958 to hold informal discussions with members of management in order to prepare for a mutually satisfactory solution of this problem in the 1959 contract. During the past year the more militant Long Beach locals at several instances refused to handle containers, specifically those used by the Matson Co. In the Bay area, however, the union was willing to go along on a trial basis with the new Matson program. As previously stated, Matson introduced the deck loading of containers, using a single gang of 9-11 men to perform the equivalent

New York Journal of Commerce, Nov. 21, 1958, p. 1.

work of over 20 gangs of 14 men each. With the Matson exception, the general union policy is "no new methods until agreement is reached in a new contract". What is the new agreement labor is trying to win? What progress has been made in that direction?

C. The Maturing Union Attitude

When the ILWU first started taking a serious look at the "new trend" in cargo handling on the waterfront is not known to this reviewer. In the contract signed between the ILWU and the WEA (Waterfront Employers Association) in November 1940, the ILWU pledged not to interfere with technological improvements (Schneider, op. cit. p. 21) but at that time there was as yet no indication of the significant changes to come.

The first published emphasis on the new problem known to the writer was in the August 16, 1957 issue of the ILWU bi-weekly, "The Dispatcher." This issue indicated with photographs some new developments, such as the introduction of super large pallets for handling 10 rolls of newspring at once and the mobile equipment developed to handle this load. The same issue deveted a column to inform its readers that a Scientific Cargo Study by the Maritime Cargo Transportation Conference of the National Academy of Sciences was underway and that the union will cooperate and advise. It was understood, the article mentions "that this (study) won't lead to any efficiency study designed to bring about speed-up".

Most significant in this issue of The Dispatcher is the permanent feature called "On The March", written by ILWU 1st Vice President J. R. Robertson. In his column, Robertson analyses and agrees with an article from the London Daily Telegraph of July 22, 1957 in which U. S. labor is characterized as being "Large, fat, sleek and smug". Robertson particularly quotes: "Automation and mechanization presents the most serious challenge to American labor and a 'sleek and smug' labor movement is not capable of meeting such a challenge." He then analyses the shape of things to come and the benefits labor can, if alert, gain from the introduction of machines. To quote "There is nothing wrong (with mechanization). In fact this is what a union should be for; to help make the machine work for the benefit of its members and to help guarantee a longer. healthier life for its members." But this can only come about if labor is healthy and "willing to keep moving ahead, to keep alive."

This article launched a most concerted educational program to acquaint the ILWU membership with the need for change and the gains that can be had from it if the union is flexible enough to look and plan ahead and strong enough to have a voice in the industry planning. This theme, in one form or another has been voiced in almost every issue of The Dispatcher since August 1957, usually by Robertson, sometimes by Bridges, ILWU President, or other members of the Executive Board of the union.

This educational process has taken many forms, reports from other countries, a cartoon of two automatons called Otto and Meck, reproductions of paintings and early engravings showing the backbreaking labor in the middle ages and the introduction of the machine, double page spreads on mechanization. The theme is always the same. As Robertson says in The Dispatcher on August 30, 1957:

"We would be fooling ourselves if we didn't agree that the shipping industry in many ways has been operating with very old fashioned methods as compared to other industries.... Our union will never fight progress, but we will never permit the word 'progress' to become the excuse for forcing people into breadlines".

On October 15-17, 1957 the ILWU called a Coast Longshore, Shipclerk and Walking Boss Causus in Portland specifically to adopt a policy on mechanization. The causus approved a policy characterized by "Mechanize and Protect." It seems that the caucus did not determine any specific policy in detail, but was called rather as a propaganda and educational gesture to further acquaint the membership with the problems lying ahead.

When contract renegotiation time came around in June 1958, neither management nor labor seemed to be ready for any finite action on the problem of mechanization. Instead it was agreed to start informal discussion immediately leading to a program for contract negotiation the following year. A wage increase for longshoremen of 10¢/hr. to \$2.63/hr. was obtained. The most significant development was a reduction of the standard longshore and clerk workshift from 9 to 8 hrs. Since the 9th hour was paid at overtime

rates, the wage increase did not compensate on a daily or weekly base for the reduction in time, even though the total work opportunity for each worker had not been decreased. However the labor negotiators were eager to press for this reduction in hours since they felt that eventually a further reduction to 6 hrs. might be necessary in order to distribute available work over the whole labor force and that such action would have to come piecemeal. Management was not eager to agree to this shift reduction since it would reduce the number of hours worked per day, and therefore increase the ship-in-port time (called ship turn-around time). To reduce the dangers of longer ship turn-around time, the availability of a third shift of 6 hours duration was agreed upon. Actually this third shift never went into operation. Management got the advantage of less overtime pay. Contrary to expectation, the ILWU membership reaction to the reduction in workshift was militantly negative so that in July a referendum on the contract was called where the proposed 8 hour workshift was voted in by a narrow majority (5655 yes vs. 5431 no votes). Eleven of the thirty Locals had a majority vote of noes. Since July 1958, the Dispatcher has been emphasizing increasingly the need for men to devote more time to living rather than to chasing for higher wages at all cost. As Bridges declared: "The answer to the machine is shorter hours, with no cut in take home pay. We have got to break with the past."

¹The Dispatcher, Sept. 26, 1958, p. 1

In August, 1958 the ILWU, the ILA and the IBT met in order to search for solutions to the inevitable jurisdictional disputes arising from further mechanization, particularly the use of containers. The ILWU does not object to the loading of the containers at the point of origination. But if containers are loaded at a staging area in or near the port city, the ILWU interprets this as purposeful shifting of work under its jurisdiction to the Teamsters. Condemnation of such containers as "hot cargo" has been threatened. It is believed that this jurisdictional problem has not as yet been settled at the time of writing this report. On December 22, 1958, the Southern California locals observed a 24 hour stopwork meeting to protest these changes in jurisdiction.

On September 11, 1958, the ILWU Coast Negotiating Committee adopted a policy statement for guidance during future negotiations on mechanization. The main points called for:

- a) Resumption of informal discussions with PMA on mechanization to plan formutually acceptable solutions whereby labor would share in the benefits of such mechanization by 1) increased or assured take homepay, 2) shorter work day, 3) a training program at the employer's expense to train ILWU members to fill all jobs created by mechanization.
- b) Complete maintenance of ILWU jurisdiction throughout the changing pattern of stevedore operations and methods of cargo handling.

¹ The Dispatcher, September 26, 1958, p. 6, 7.

In January 1958 U.S. Rep. Thomas Pelly of the House
Merchant Marine and Fisheries Committee urged "a helping
hand from government" to aid the industry in solving the
labor and technical problems arising out of containerization.

The final Union policy regarding mechanization and the demands to be made for the crucial contract renewal was hammered out at the ILWU biennial convention and the Coast Longshore, Shipclerk and Walking Boss Causus which met April 6-15, 1959 in Seattle, Washington.

The policy on automation and mechanization states in part:

The principle the ILWU applies is that wherever there is anything which can be done better or easier by a machine than by man, it is worthwhile to let the machine do it.

This is a summary of the findings and decisions of the caucus in Seattle:

"It was decided after a day and a half of debate to vote up a recommendation for a funded plan which would help provide the currently registered men with a share in the benefits of mechanization and other improved methods of cargo handling. The plan will be subject of negotiations for a new Coast Longshore Agreement to replace the present contract expiring June 15, 1959. The caucus was told that in informal meetings the employers - PMA have been told that the union would expect an hour's straight time pay to be placed into a fund for the registered men for every hour of production that is saved by any and all improvement factors as measured against past performance. the informal discussion with the employers has already brought agreement that a measure of production must be established for a recent period to be used as a 'norm' against which the industry can measure changes and improvements The ILWU-PMA informal discussion have demonstrated that the parties are agreed in principle that the present work force will be maintained and that the

Policy Statement#1, ILWU Biennial Convention.

benefits of mechanization will be apportioned to the employers and the present work force. Such an agreement in principle is an important step ahead for the membership. It has been further recognized that the operation and handling of any new machines comes under the jurisdiction of our union, and if necessary, employer-paid, on-the-job training programs will be instituted to train the men for these new jobs. The Coast Committee has to conclude that pushing up the wage rates alone will not meet our needs. What is required is an approach which is flexible and precise enough to dig out a proper worker's share of the benefits."

This then is the official union position, agreed to in principle by the management's representative, the PMA. The union maintains that its demand for reimbursement at the rate of I hour straight time per hour saved is fair. The reasoning is that straight time is only 60% of total wage cost per hour (see wages, Chapter II). In addition management would save the heavy ship burden accrued during ship-in-port time and other overhead costs. Since this is labor's starting demand, final settlement will depend on managements negotiating ability. The ILW has even indicated a willingness to fix the compensation rate at the 1958 straight hour rate. This way, the union argues, as time goes on and wages increase, the incentive to management will become increasingly greater and so "force management to plan for productivity increases". An interesting note can be added. While Mr. Paul St. Sure, pres. of PMA agrees that agreement in

ı ILWU News Release, April 14, 1959.

Wages, Chapter II.

principle had been reached months ago on the sharing of the benefits, several of the presidents top shipping companies recently insisted that the employers were not party to such an agreement, and that their company would never consent to such a policy. Management is faced with the alternative of benefit sharing, at least over a period of adjustment or of not sharing any benefits and not getting any but only strife and work stoppages. The union seemingly has a realistic attitude. Instead of direct incentive payment to the individual, which historically has limited benefits, the benefits are to be collected in a fund, to be administered by a joint management-labor committee to permit compensation for loss of work, earlier retirement of workers and retraining until such a time that the work force will stabilize at the new demand level.

Probably the biggest advantage offered by labor in this approach is the potential elimination of most restrictive practices, since compensation would be for all productivity improvements. This will permit even companies not participating in mechanisation to gain a new economic potential, and for all companies it will permit reevaluation of the mechanization investment necessity. See previous discussion.

The greatest danger connected with this negotiated sharing is the fact that for management's and labor's protection it must be based on a valid base of past performance. This, both parties admit, requires a new approach to measurement and data keeping. Labor seems to be

willing to engage in such a system if need be. Management, for many reasons, some of which have been previously discussed in this paper, seems reluctant to impose upon the industry such a control procedure. Many management members openly prefer a simpler, even though less reliable procedure, such as a specified pay-off to labor or "tax" on each container such as is being discussed at the moment on the East Coast. Such a procedure is viewed by this reviewer with many misgivings. First it would not motivate labor to increase productivity on its own account and therefore will help only those companies who are able to engage in significant mechanization. Secondly it will permit labor to sabotage management by collecting the tax and slowing down at the same time. Such a case has recently come to light where a company has introduced containers with considerable gain in productivity, but the same company has suffered such a loss in productivity on its noncontainerised cargo that its overall productivity (HRS/ton) has decreased.

To summarize the potential advantages of the solution which is being discussed in the present negotiations:

For management:

- a. cost reduction
- b. better use of capital investment
- c. potential market increase
- d. free hand to develop new systems
- e. less sources of friction

Unpublished MCTC data.

- competition with systems requiring more new investment.
- better service to customer due to less shipping time better thru-service due to longshore-teamster cooperation h.
- i. each company pays only for its measured gain.

For Labor:

- a. participative control
- profit sharing by protected work-opportunity, earlier retirement, fewer hours of work, training for new jobs.
- by competing with containers, less shift to new systems
- d. less fatigue, less accidents in mechanized systems
- higher prestige e.

For the consumer:

Lower overall handling cost, hence less price (that is if the parties will permit the consumer to share the benefits).

V. CONCLUSIONS

The maritime cargo industry faces a battle of survival against increasing costs, poorer service and increasing competition from which even the as yet unaffected overseas service may not forever remain free. Labor and management have tentatively agreed on a plan which might be a solution to this old problem, or which at least will open the way to a new cooperative approach to a meaningful solution.

It is interesting to note that overseas too the industry is becoming restless under the impact of the need for a new approach. In France an attempt has been made by a consultant, the Bureau d'Etudes Economiques et Sociales to help management and labor get together by getting new equipment and by giving labor a funded incentive for higher productivity. Even in the USSR the government is contemplating a new "participative" pay structure to increase cargo handling productivity on ships. In Japan in May 1959 the first All Pacific Asian Dock Workers Union Conference met to discuss common problems. High on the list was mechanization and productivity.

June 15 will show whether the industry can come to a mature understanding and a forward looking common approach. Harry Bridges stated on May 20, 1959 "We expect that a new contract will be negotiated without any trouble" (ILWU News Release, May 20, 1959).

The question is: Does "no trouble" mean a solution for the future or merely a convenient sell-out for the present?

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