



S T E A M E R   A N D   A S T E .

C O M P A R I S O N S .

	1 9 0 4	1 9 0 5
Days in commission,	171	250
Number of miles traveled,	26107	28610
Number of trips made,	18	23
Number cargoes freight carried,	19	29
Gross tons freight carried,	56560	83056
Average rate freight per gross ton,	\$.6603	\$.6566
Average cost to carry per <b>gross</b> ton freight,	.5327	.4816
Net earnings per ton freight carried,	\$.1276	\$.1750
Cost per ton to operate after eliminating Ex. and Gen. Rprs.	\$.5030	\$.4470
Gross Receipts,	\$37349.27	\$54540.20
Gross Expenditures,	30127.35	40005.82
Net Earnings,	\$7221.92	\$14534.58
Percentage of operations to earnings,	80.6	73.3
Gross earnings per mile traveled,	\$1.4306	\$1.9063
Operating expense per mile traveled,	1.1540	1.3983
Net earnings per mile traveled,	\$.2766	\$.5080
Gross earnings per day,	\$218.41	\$218.16
Operating expenses per day,	176.18	160.02
Net earnings per day,	\$42.23	\$58.14
Expenses per day excluding cargo handling costs,	\$115.99	\$103.51
Expenses per day exclud. cargo hdlg. costs and Ex. & Gen. Rprs.	\$106.19	\$92.01
Cost provisions per man per day (excluding extra meals)	\$.384	\$.347
Average lbs. coal consumed per hour steamed,	1548	1648
Average lbs. coal consumed per mile steamed,	141	152
Average cost coal consumed per mile steamed,	\$.1689	\$.1825
Average cost oil consumed per hour steamed,	\$.0445	\$.0321
Average cost oil consumed per mile steamed,	\$.00405	\$.00295
Average wages paid per day while in commission,	\$33.15	\$32.61
Average ore cargo from Lake Superior,	3010	3030
Average days per trip going up light to Marquette,	8½	8½
Average days per trip going up light to head Lake Superior,	9½	-----
Average number miles per hour - light,	11.88	11.92
Average number miles per hour - loaded,	10.29	10.24
General average number miles per hour,	10.99	10.81
Average draft water on ore cargoes from Lake Superior,	(17'8" Ford 18'4" Aft	(17'10" Ford 18'5" Aft
Average mean draft water on ore cargoes from Lake Superior,	18'	18'2"

LGM THB  
2-16-06

STEAMER ANDASTE  
COMPARISON OF ITEMS OF DISBURSEMENT.

	1904	1905	+ OR -	REMARKS
EXTRAORDINARY & General Repairs	\$1,674.86	\$2,874.94	+\$1,200.08	In 1905 patched and repaired Boilers at cost of \$775.11. Also extensive repairs to decks in cargo hold, crank room, etc., costing upwards of \$800.00
Ship Keeping & Winter Dockage	110.83	65.51	- 44.92	Steamer spent a longer time at dock during Spring 1904, on account Shipmasters' strike
Fitting Out	700.80	357.59	- 343.21	The fitting out bill for Ship Chandlery supplies, amounting to about \$200.00, was charged in trip #2 accounts, instead of fitting out, which therefore decreased fitting out cost and increased Mates supplies
Wages & Captains Salary	7,127.98	9,357.11	+ 2,229.15	Season 1905 was 79 days longer than 1904. Rate of wages was same for both years
Captains Expense Account	49.66	50.08	+ .42	
Tug Services	67.53	371.12	+ 303.59	10 cargoes more freight were carried in 1905 than 1904
Handling Cargoes	10,292.33	14,126.70	+ 3,834.37	Rate for unloading increased 1¢ per ton in 1905 and Steamer carried 15503 tons more ore than in 1904
Taxes	403.42	463.13	+ 59.70	Tax rate increased from \$2.26 in 1904 to \$2.69 in 1905
Marine Insurance	2,389.94	3,418.93	+ 1,028.99	In 1905 the cost of extending Insurance after Dec. 5th was \$643.31. The low premium in 1904 is due to rebate received w/o lay-up returns for short season, that year. Valuation of Steamer was same both years
Freight List Insurance	61.09	51.94	- 9.25	
Mates Supplies	217.41	427.53	+ 220.12	See above remarks under "fitting out".
Provisions	1,191.13	1,577.24	+ 386.11	Based on decreased cost of \$.037 per man per day
Stewards Supplies	189.78	100.01	- 89.77	
Fuel	4,549.12	5,223.97	+ 674.85	Based on increased consumption of 11 lbs. per mile (Steamer carried 5 cargoes more coal than in season 1904)
Engineers Lubricants	105.70	84.95	- 20.75	Based on decreased cost of \$.00110 per mile run
Engineers Supplies	89.26	124.74	+ 35.48	
Boiler Repairs	52.19	251.69	+ 199.50	In 1905 necessary to patch starboard boiler and repair port boiler at contract price of \$140.00
Machinery Repairs	6.74	45.27	+ 38.53	
Auxiliary Machinery Repairs	6.71	20.78	+ 14.07	
General Expenses	265.61	260.36	- 5.25	
Laying up	575.22	741.75	+ 166.53	More time required for laying up work in 1905, labor cost exceeding 1904 by \$163.26

LGM-ACS  
2/17/06

ANNUAL REPORT  
OF  
STEAMER PIONEER  
1905.

S T E A M E R P I O N E E R .

GENERAL OPERATIONS.

The Steamer PIONEER sailed from the port of Cleveland on first trip of Season 1905 on April 20th. The PIONEER towed the Schooner CHATTANOOGA the first 18 trips of the season between Lake Erie ports and Marquette, Mich.

About the first of November it was necessary for the consort to go to shipyard for repairs and the PIONEER then made four round trips running alone. The last cargo, Trip 22, was unloaded at Cleveland December 9th, the Steamer therefore having been in commission 233 days.

On the last trip of the season a coal cargo was taken for delivery at Escanaba, all other upbound trips having been made light. On down trips, therefore, 21 cargoes were loaded at Marquette and 1 cargo at Escanaba. The PIONEER carried 39,408 gross tons of freight during the season, traveling 27,865 miles.

To the average rate per ton of freight carried, viz., \$.6986, should be added \$.3203 per ton for towing the CHATTANOOGA, making the total receipts per gross ton of freight carried \$1.0189, as against \$.9925 in previous year.

The average cost per ton of freight carried was \$.7990 in 1905 and \$.9160 in 1904, or a decrease of \$.1170 per ton. The less cost per ton in 1905 is largely due to the increased length of season, which enabled Steamer to carry 12,981 gross tons more freight than was carried in preceding year, thereby giving a lower distribution of cost in fixed charges per ton.

The average net earnings per ton of freight carried are \$.2199 in 1905 and \$.0765 in previous year.

S T E A M E R P I O N E E R .

GENERAL REPAIRS.

After the PIONEER was laid up in the Fall of 1904 it was necessary to go into dry dock in order to repair propellor wheel broken in October, 1904. This was an insurance claim. While in dry dock opportunity was taken to fill the stern bearing with lignum vitae; also a seacock which had become rusted and loose was renewed, and an extra blade for wheel provided. These several items cost about \$300.00.

The boilers on this boat are now 14 years old and have given more or less trouble for several seasons. They have accordingly been given attention from time to time. A patch was placed on the first ring of the starboard furnace of the starboard boiler, and two on the port boiler, one on the first ring of the starboard furnace and one on the second ring of the port furnace.

In June the furnaces gave further trouble and a 52" patch had to be put on the backhead of the port furnace of the starboard boiler, and new stay bolts were required in starboard furnace of starboard boiler.

A 30" crack developed in the starboard furnace of the port boiler and a new patch had to be put on same.

In addition to these specific items there was much calking and plugging of leaks and various patches during the entire season. The repairs which were made from time to time during the season in order to bring the boilers through aggregated about \$800.00.

A great deal of trouble has been experienced the last few seasons keeping firemen on this boat. With a view to improving the situation the boilers were equipped with Diamond Steam Flue Blowers. The cost of installing four blowers, together with the necessary pipings and fittings was \$288.98.

S T E A M E R P I O N E E R.

GENERAL REPAIRS - 2.

The old wooden life boat on the port side of the Steamer was worn out and had been condemned by the Government Inspector. Accordingly a new metallic boat was installed, 22 feet long, with all necessary fittings, at a cost of \$142.35.

Before going to sea another season there will have to be considerable repair, much of which is of a minor nature.

The most important expenditure will be on the boilers. As mentioned above same are in a bad condition. It has been decided to take out the furnaces and replace with new, two furnaces for each boiler of the Adamson type. No one would take the work on contract but we have received a limiting price from the American Ship Building Co. of \$3525.00. Mr. Hynd writing on this subject states as follows:

"I would therefore advise that these furnaces be taken out and renewed. This is likely to be rather an extensive job as I do not think it possible to remove these without taking off the breechings and furnace fronts and the power parts of the front head. I also find that the furnaces are so close together that it will not be possible to put in corrugated furnaces unless of smaller dimensions, which would not appear to be advisable, and in any case the standard type of corrugated furnace cannot be used without renewing the front head. I would therefore say that the new furnaces should be of the Adamson Type as before."

The after deck of this boat has been giving trouble for the past five or six years, leaks developing from time to time. This deck has been patched and nursed along but it is now no longer possible to do so, and a new deck will be laid, together with a new covering board, and the guard rail along the deck refastened. This work will cost about \$700.00.

JHS THB  
2-19-06

S T E A M E R P I O N E E R.

ACCIDENTS.

CLEVELAND, MAY 5, 1905, TRIP 1:

While the Steamer was unloading at the Nypano Dock, the clam shell unloader dropped a piece of ore on the rail, breaking about six feet of same. The damage was repaired and the cost taken up by the dock company.

CLEVELAND, JULY 4, 1905, TRIP 7:

The Steamer PIONEER came into the port of Cleveland about two o'clock the morning of July 4th and proceeded up the river under check, and from the Superior Street viaduct to the Columbus Street bridge under double check. The Barge WM. MCGREGOR was loading coal at the Irishtown coal dock. The PIONEER passed her a short distance off, but just after the stern of the PIONEER got by her it was seen that her mainmast fell over, owing to her having surged and the mast coming in contact with the unloading machinery, breaking same off; the broken portion fell on the boiler house breaking some steam pipes. The cost of repairing the damage amounted to \$108.32, but a compromise was made with the owners of the MCGREGOR on an equal division of same, or \$50.16, which amount became a claim on the underwriters of the PIONEER and which has been taken up by them.

ASHTABULA, JULY 13, 1905, TRIP 8:

While unloading at the Ashtabula Dock the clam shell struck a stanchion after side No.6 Hatch, breaking it in two. This stanchion had been previously partially broken and bent. Consequently no claim was made on the Ashtabula Dock Company account of same.

CLEVELAND, JULY 31, 1905, TRIP 10:

While unloading at the C & F Dock, Slip No.1, an unloading machine fouled the fore topmast, breaking it off at



S T E A M E R P I O N E E R .

A C C I D E N T S .

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CLEVELAND, JULY 31, 1905, TRIP 10:

While unloading at the C & P Dock, Slip No.1, and

S T E A M E R P I O N E E R.

ACCIDENTS - 2.

truck. Same was repaired at a cost of \$6.56 which will be borne by the C. & F. Dock Co.

ASHTABULA, AUGUST 9, 1905, Trip 11:

While unloading at the Ashtabula Dock stanchion on the after side of No. 6 Hatch was broken by the clam shells. The dock people advised that they would make good the damage but that the stanchion was entirely too light for contact with the present unloading machinery and that a heavier stanchion should be put in. Repair was made of the damage at a cost of \$33.10 which will be repaid us by the dock company.

CLEVELAND, OCTOBER 12, 1905, TRIP 17:

The PIONEER was going up the river and met the Steamer W. H. WOLFE coming down. When passing the WOLFE sheered over, striking the PIONEER on the port bow, breaking the rail. The PIONEER had stopped and was lying still at the time. As the damage was trifling and was repaired by the crew no claim was made on the WOLFE.

S T E A M E R P I O N E E R .

	1 9 0 4		1 9 0 5	
	DAYS	PER CENT	DAYS	PER CENT
Time in port,	58½	34.2	80	34.3
Time sailing,	101	59.2	131	56.2
Time lost by bad weather, fog and low water,	9½	5.5	*13½	5.8
Time lost waiting at Soo Canal and River,	2	1.1	3¾	1.7
Time lost by accidents,	---	-----	4¾	2.0
Total time in commission,	171	100.0	233	100.0
Number of trips made,		15		22
Number of cargoes carried,		15		23

PERCENTAGES OF TIME IN COMMISSION IN PORT.

Season 1901.....30.3  
 Season 1902.....36.5  
 Season 1903.....32.6  
 Season 1904.....34.2  
 Season 1905.....34.3

\* This includes 4 days time delayed by heavy ice on Lake Superior first trip Season 1905.

LGM THB  
 2-19-06

S T E A M E R P I O N E E R.

OPERATING ACCOUNT.

<u>RECEIPTS.</u>	GROSS TONS	AMOUNT	PER GROSS TON FREIGHT CARRIED
21 cargoes iron ore from Marquette,	36583	\$25608.10	\$.7000
1 cargo iron ore from Escanaba,	1586	951.60	.6000
1 cargo coal to Escanaba, (1388 net tons @ 70 cents)	1239	972.02	.7845
<u>23</u>	<u>39408</u>	<u>\$27531.72</u>	<u>\$.6986</u>
Amount received for towing CHATTANOOGA- $\frac{1}{2}$ freight,		12619.21	.3203
		\$40150.93	\$1.0189
<u>DISBURSEMENTS.</u>			
Extraordinary and General Repairs,	\$1975.51		
Ship Keeping and Winter Dockage,	53.50		
Fitting Out,	961.55		
Wages and Captain's Salary,	9131.23		
Captain's Expense Account,	45.18		
Tug Services,	8.90		
Handling Cargoes,	7633.90		
Taxes,	410.93		
Marine Insurance,	2012.53		
Freight List Insurance,	18.33		
Mates Supplies,	230.94		
Provisions,	1495.90		
Steward's Supplies,	156.84		
Passenger Cabin Equipment,	4.25		
Fuel,	5530.35		
Engineer's Lubricants,	129.76		
Engineer's Supplies,	202.27		
Boiler Repairs,	157.84		
Machinery Repairs,	51.30		
Auxiliary Machinery Repairs,	24.39		
General Expenses (Telegrams, Dues L.C.A., &c.)	141.07		
Laying Up,	1108.30	\$31484.67	.7990
Net earnings,		\$ 8666.26	\$.2199
Less amt. charged to Owners Propn. of Loss,		339.46	
Making total net gain for season 1905,		\$ 8326.80	

NOTE: The cost per ton to operate after eliminating Extraordinary and General Repairs Account is \$.7488 in 1905 and \$.8159 in 1904.

S T E A M E R P I O N E E R .

STATEMENT SHOWING ITEMS CHARGED TO OWNERS PROPORTION OF LOSS  
DURING SEASON 1905.

STRIKING OBSTRUCTION IN RIVER AT ASHTABULA, OCTOBER 28, 1904:

Deductible average,	\$341.18
Less cash discount allowed by Great Lakes Towing Co. (10%) on tug bill,	<u>1.72</u>
<u>Net amount charged to Owners Proportion of Loss,</u>	<u>\$339.46</u>

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2-20-06

S T E A M E R P I O N E E R .

COMPARISONS.

	1 9 0 4	1 9 0 5
Days in commission,	171	233
Number of miles traveled,	21300	27865
Number of trips made,	15	22
Number cargoes freight carried,	15	23
Gross tons freight carried,	26427	39408
Average rate freight per gross ton,	\$.9925	\$1.0189
Average cost to carry per gross ton freight,	.9160	.7990
Net earnings per ton freight carried,	\$.0765	\$.2199
Cost per ton to operate after eliminating Ex. & Gen. Rprs.	\$.8159	\$.7488
Gross Receipts,	\$26228.59	\$40150.93
Gross Expenditures,	24208.33	31484.67
Net earnings,	\$ 2020.26	\$ 8666.26
Percentage of operations to earnings,	92.3	78.4
Gross earnings per mile traveled,	\$1.2314	\$1.4409
Operating expenses per mile traveled,	1.1365	1.1299
Net earnings per mile traveled,	\$.0949	\$.3110
Gross earnings per day,	\$153.38	\$172.32
Operating expenses per day,	141.57	135.13
Net earnings per day,	\$ 11.81	\$ 37.19
Expenses per day excluding cargo handling costs,	\$112.20	\$102.36
Expenses per day exclud. cargo hdlg. costs and Ex. & Gen. Rprs.	\$96.74	\$93.88
Cost provisions per man per day (excluding extra meals),	\$.379	\$.357
Average lbs. coal consumed per hour steamed,	1468	1802
Average lbs. coal consumed per mile steamed,	167	203
Average cost coal consumed per mile steamed,	\$.1688	\$.1952
Average cost oil consumed per hour steamed,	\$.0404	\$.0412
Average cost oil consumed per mile steamed,	\$.00459	\$.00462
Average wages paid per day while in commission,	\$32.08	\$32.85
Average ore cargo from Lake Superior	1762	1735
Average days per trip towing CHATTANOOGA light to Marquette	11	10 $\frac{1}{2}$
Average number miles per hour Towing CHATTANOOGA - light,	8.75	8.74
Average number miles per hour towing CHATTANOOGA - loaded,	8.12	8.15
General average number miles per hour towing CHATTANOOGA,	8.44	8.43
Average draft water on ore cargoes from Lake Superior,	(15'7" Ford	(15'7" Ford
Average mean draft water on ore cargoes from Lake Superior,	(16'5" Aft	(16'1" Aft
PIONEER waiting for CHATTANOOGA during season,	16'	15'10"
PIONEER'S percentage of time waiting for CHATTANOOGA,	5 $\frac{1}{2}$ days	13 $\frac{3}{4}$ days
	3.2	5.9

LGM THB  
2-20-06

STEAMER PIONEER

COMPARISON OF ITEMS OF DISBURSEMENT

	1904	1905	+ OR -	REMARKS
Extraordinary & General Repairs	\$2,848.23	\$1,975.51	- \$ 862.71	In 1904 layed entire new floor ceiling in cargo hold, \$1,185.09
Shipkeeping & Winter Dockage	30.00	53.50	+ 23.50	
Fitting Out	468.23	961.55	+ 492.32	A large purchase of supplies necessary, and more time required for fitting out in 1905
Wages & Captains Salary	7,015.76	9,131.23	+ 2,115.47	Rate of wages remained the same both years. Season 1905 was 62 days longer than 1904
Captains Expense Account	37.50	45.18	+ 7.68	
Tug Services	18.00	3.90	- 14.10	
Handling Cargoes	5,021.13	7,632.80	+ 2,611.67	Carried 11742 tons more ore in 1905 than in 1904, and unloading rate increased 1/4 per ton
Taxes	345.79	410.23	+ 64.44	Rate of taxes \$2.69 in 1905 and \$2.26 in 1904
Marine Insurance	3,049.20	3,012.53	- 36.67	Valuation of Steamer was same for both years. In 1905 received rebate \$123.27, lay up return, 15 day period
Freight List Insurance	28.06	18.33	- 9.73	
Mates Supplies	141.55	230.94	+ 89.39	
Provisions	1,134.66	1,495.90	+ 361.24	Based on decreased cost of \$.022 per man per day
Stewards Supplies	100.57	156.84	+ 56.27	
Passenger Cabin Equipment		4.25	+ 4.25	
Fuel	3,597.20	5,530.25	+ 1,933.05	Based on increased consumption of 36 lbs. per mile run
Engineers Lubricants	97.73	132.76	+ 35.03	Based on increased cost of \$.00003 per mile run
Engineers Supplies	70.98	302.27	+ 231.29	The increased length of season in 1905 necessitated a larger purchase of supplies
Boiler Repairs	46.47	157.84	+ 111.37	
Machinery Repairs	8.15	51.30	+ 43.15	
Auxiliary Machinery Repairs	12.50	24.39	+ 11.89	
General Expenses	229.02	141.07	- 87.95	In 1904 Chief Engineer Maylon received second prize of \$75.00 for lowest fuel consumption in 1903
Laying Up	1,130.21	1,108.20	- 22.01	

LGM-AGS.  
2/19/06

ANNUAL REPORT  
OF  
SCHOONER CHATTANOOGA  
1905.

*Chattanooga*



S C H O O N E R C H A T T A N O O G A .

GENERAL OPERATIONS.

The Schooner CHATTANOOGA sailed from the port of Cleveland on first trip of season 1905 on April 20th, and arrived at Cleveland ready to go into winter quarters on November 2nd, having therefore been in commission 196 days.

This vessel made 18 round trips for the season transporting iron ore from Marquette, Mich., to Lake Erie ports, being towed by the PIONEER every trip. The upbound trips were made going light. The CHATTANOOGA traveled a total distance of 21,579 miles, carrying 72,110 gross tons of freight.

The average rate of freight received was the established season rate of \$.7000 per gross ton. This as against \$.6500 per ton received in previous year.

The average cost to carry per gross ton of freight was \$.5941 in 1905 and \$.5983 in 1904. The average net earnings per gross ton, therefore, are \$.1059 in 1905 as compared with \$.0517 in preceding year.

LGM THB  
2-20-06

S C H O O N E R   C H A T T A N O O G A .

GENERAL REPAIRS.

The total amount of General Repairs expended on this vessel for the Season 1905 was not large, the aggregate being but \$996.71.

The most important item was the calking of the outside from light water line up to one seam above the loading line, or 15 seams in all on each side. The outside thread of oakum was decayed and could not be horsed in, and so they had to reef it out, and then calk in two threads of new oakum. The cost of this work was \$481.90.

Before going to sea another season some very important repairs will have to be made on this vessel the cost of which repairs will be large.

The underwriters will bear the cost of the repairs on account of the damage sustained in the accident on Lake Huron October 17, 1905, wherein in stress of weather the following damage was done:

On both the port and starboard sides between the main and mizzen masts,, the covering board and solid bulwarks were cracked through, the scarphs of same being more or less pulled. The deck planking between the covering board and the hatch coamings broken practically across the ship. The calking of the topside planking between deck ceilings on both sides, also decks and coamings, show evidences of movement, especially at the butts and scarphs, and will have to be rectified.

This vessel was built in 1898 at the James Davidson Ship Yard, West Bay City, Mich. Although not old, a careful examination of the ship in opening her up to make repairs, shows that the oak used in her construction was of the most inferior quality, much of the timber being pronounced by those

S C H O O N E R C H A T T A N O O G A .

GENERAL REPAIRS - 2.

thoroughly acquainted with such matters as having been "dead" when used.

In order to repair the damage chargeable to the underwriters above referred to, and put the vessel in good condition for active service, it is known that it will be necessary to make the following repairs:

Entire new upper deck,  
New covering board on each side,  
Hatch coamings - Renewed,  
Hatch covers - New set,  
Main deck beams to be refastened and re-inforced; never properly fastened,  
Panting beams to be fitted at each side of ship,  
Rolling rods of iron to be fitted between each hatch,  
Deck stringer plate running fore and aft in upper deck for strengthening,  
Re-planking vessel for almost her entire length on both sides from 15 to 18 strakes,  
Above work all to be calked.

No estimate can be made of the total cost of this work, but we may reasonably look for a cost of from \$25,000 to \$30,000, of which \$4,000 or \$5,000 will undoubtedly be borne by the underwriters of the ship.

JHS THB  
2-20-06

SCHOONER CHATTANOOGA.

ACCIDENTS.

LAKE HURON, OCTOBER 17, 1905, TRIP 18:

The CHATTANOOGA was bound to Lake Huron in tow of the Steamer PIONEER, when she encountered a heavy gale from the westward. Between 8:00 and 9:00 P.M. the weather became heavier, the vessel rolled badly and was severely pounded. As the weather bid fair to grow worse the towing steamer turned around and took the CHATTANOOGA to Sand Beach for shelter, which point was reached about 11:00 P.M. that same date.

The damage sustained was quite important. On both the port and starboard sides between the main and mizzen masts, the covering board and solid bulwarks were cracked through, the scarphs of same being more or less pulled. The deck planking between the covering board and the hatch coamings broken practically across the ship. The calking of the topside planking between deck ceilings on both sides, also decks and coamings, shows evidences of movement, especially at the butts and scarphs.

The loss sustained by reason of the stress of weather is recoverable under the vessel's insurance policies. This work will be done in conjunction with a general repair, which it is found necessary to make on this vessel, and which is referred to elsewhere. A proper division will be arrived at between the underwriters and the owners of the ship as to the portion each should bear. ✓ No estimate can be made of the extent of repair necessary in conjunction with this accident at this time.

S C H O O N E R   C H A T T A N O O G A .

	1 9 0 4		1 9 0 5	
	DAYS	PER CENT	DAYS	PER CENT
Time in port,	72½	41.0	72	36.7
Time sailing,	87¾	49.6	108	55.1
Time lost by bad weather, fog and low water,	8¾	4.9	*12¼	6.3
Time lost waiting at Soo Canal and River,	2	1.1	3½	1.8
Time lost by accidents,	6	3.4	½	.1
Total time in commission,	177	100.0	196	100.0
Number of trips made,	14		18	
Number of cargoes carried,	14		18	

P E R C E N T A G E S   O F   T I M E   I N   C O M M I S S I O N   I N   P O R T .

Season 1901.....37.1  
 Season 1902.....39.9  
 Season 1903.....42.9  
 Season 1904.....41.0  
 Season 1905.....36.7

\* This includes 4 days time delayed by heavy ice on Lake Superior, first trip Season 1905.

LGM THB  
2-20-06

S C H O O N E R   C H A T T A N O O G A .

OPERATING ACCOUNT.

<u>RECEIPTS.</u>	GROSS TONS	AMOUNT	PER GROSS TON FREIGHT CARRIED
18 cargoes iron ore from Marquette	72110	\$50477.00	\$.7000
 <u>DISBURSEMENTS.</u> 			
Extraordinary & General Repairs,	\$ 996.71		
Ship Keeping and Winter Dockage,	98.00		
Fitting Out,	270.70		
Wages and Captain's Salary, (Pioneer \$12619.21	3638.10		
Towing( (Tugs, 3291.02	15910.23		
Captain's Expense Account,	18.20		
Handling Cargoes,	16945.86		
Taxes,	247.86		
Marine Insurance,	2248.47		
Freight List Insurance,	37.85		
Mates Supplies,	1067.22		
Provisions,	671.59		
Stewards Supplies,	60.36		
Fuel,	195.70		
Lubricating Oil,	15.76		
Engineers Supplies,	.85		
Machinery Repairs,	6.30		
General Expenses (Telegrams, Dues L. C. A., &c)	96.34		
Laying Up,	315.51	42841.61	.5941
Net gain for Season 1905,		\$ 7635.39	\$.1059

NOTE: The cost per ton to operate after eliminating Extraordinary and General Repairs Account is \$.5803 in 1905 and \$.5568 in 1904.

S C H O O N E R   C H A T T A N O O G A .

COMPARISONS.	1 9 0 4	1 9 0 5
Days in commission,	177	196
Number of miles traveled,	17735	21579
Number of trips made,	14	18
Number cargoes freight carried,	14	18
Gross tons freight carried,	56006	72110
Average rate freight per gross ton,	\$.6500	\$.7000
Average cost to carry per gross ton freight,	.5983	.5941
Net earnings per ton freight carried,	\$.0517	\$.1059
Cost per ton to operate after eliminating Ex. & Gen. Rprs.	\$.5568	\$.5803
Gross Receipts,	\$36403.90	\$50477.00
Gross Expenditures,	33508.72	42841.61
Net earnings,	\$ 2895.18	\$ 7635.39
Percentage of operations to earnings,	92.0	84.8
Gross earnings per mile traveled,	\$2.0526	\$2.3391
Operating expenses per mile traveled,	1.8894	1.9853
Net earnings per mile traveled,	\$.1632	\$.3538
Gross earnings per day,	\$205.67	\$257.54
Operating expenses per day,	189.31	218.58
Net earnings per day,	\$ 16.36	\$ 38.96
Expenses per day excluding cargo handling costs,	\$118.11	\$132.12
Expenses per day exclud. cargo hdlg. costs and Ex. & Gen. Rprs.	\$104.97	\$127.03
Cost provisions per man per day (excluding extra meals),	\$.324	\$.343
Average wages paid per day while in commission,	\$12.14	\$15.00
Average ore cargo from Lake Superior,	4000	4006
Average days per trip going up light to Marquette,	10 $\frac{3}{4}$	10
Average number of miles per hour - light,	8.75	8.74
Average number of miles per hour - loaded,	8.12	8.15
General average number miles per hour,	8.44	8.43
Average draft water on ore cargoes from Lake Superior,	(18'2" Ford 18' Aft)	(18'3" Ford 18' Aft)
Average mean draft water on ore cargoes from Lake Superior,	18'1"	18'1"
Chattanooga waiting for Pioneer during season,	11 $\frac{1}{2}$ days	9 $\frac{3}{4}$ days
Chattanooga's percentage of time waiting for Pioneer,	6.49	4.93

NOTE: Prior to Season 1905 the agreement between Lake Carriers Association and Lake Seamens Union was that tow barges of a carrying capacity up to 4000 tons would only need 4 seamen in crew. The agreement for 1905 stipulated that tow barges with a gross registered tonnage exceeding 2100 tons should carry 6 seamen in crew. The increased wages paid per day in 1905 therefore is due to the extra seamen added to crew in 1905.

LGM THB  
2-20-06

STEAMER CHATTANOOGA.

COMPARISON OF ITEMS OF DISBURSEMENT.

	1904	1905	+ OR -	REMARKS
Extraordinary & General Repairs	\$2,326.10	\$ 996.71	- \$1,329.39	In 1904 vessel placed in dry dock and given a thorough bottom calking, \$1,615.52
Shipkeeping & Winter Dockage	143.50	98.00	- 45.50	
Fitting Out	257.75	270.70	- 12.95	
Wages & Captains Salary	2,762.58	3,638.10	+ 875.52	(Rate of wages was same both years. Season 1905 was 19 days longer than 1904, and 2 extra seamen were carried from May 27th, increasing total crew to 10 men instead of 8 as former seasons.
Captains Expense Account	23.65	18.20	- 5.45	
Tug Services	2,197.56	3,291.02	+ 1,093.46	(In 1905 made 4 trips more than in 1904, and on last trip tugs towed Chattanooga from Toledo (to Cleveland, at contract price of \$175.00.
Handling Cargoes	12,602.35	16,945.86	+ 4,343.51	Rate for unloading ore increased 1¢ per ton in 1905 and vessel carried 16,104 more tons than in 1904.
Taxes	211.31	247.86	+ 36.55	Tax rate increased from \$2.26 in 1904 to \$2.69 in 1905.
Marine Insurance	2,203.70	2,248.47	+ 44.77	Valuation was same both years; received rebates for lay-up returns on account short season in both years.
Freight List Insurance	85.49	37.85	- 47.64	
Mates Supplies	575.59	1,067.22	+ 491.63	In 1905 purchased 2 lake tow lines, and only 1 purchased in 1904.
Provisions	461.28	671.59	+ 38.95	Based on increased cost of \$.019 per man per day.
Stewards Supplies	34.63	60.36	+ 25.73	
Fuel	218.25	195.70	- 22.55	
Engineers Lubricants	16.12	15.76	- .36	
Engineers Supplies	2.29	.85	- 1.44	
Boiler and Machinery Repairs	12.95	6.30	- 6.65	
General Expenses	113.65	96.34	- 17.31	
Laying-up	208.93	315.51	+ 106.58	

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2/20/06





ANNUAL REPORT  
OF  
PIONEER & CHATTANOOGA COMBINED  
1905.

*Pioneer & Chattanooga, Combined*

PIONEER AND CHATTANOOGA - COMBINED.

<u>RECEIPTS.</u>	GROSS TONS	AMOUNT	PER GROSS TON FREIGHT CARRIED
<u>F r e i g h t s.</u>	111518	\$78008.72	\$.6995
<u>DISBURSEMENTS.</u>			
Extraordinary and General Repairs,	\$ 2972.22		
Ship Keeping and Winter Dockage,	151.50		
Fitting Out,	1232.25		
Wages and Captain's Salary,	12769.33		
Captain's Expense Account,	63.38		
Tug Services,	3299.92		
Handling Cargoes,	24579.66		
Taxes,	658.79		
Marine Insurance,	4261.00		
Freight List Insurance,	56.18		
Mates Supplies,	1298.16		
Provisions,	2167.49		
Steward's Supplies,	217.20		
Passenger Cabin Equipment,	4.25		
Fuel,	5726.05		
Engineer's Lubricants,	145.52		
Engineer's Supplies,	203.12		
Boiler Repairs,	157.84		
Machinery Repairs,	57.60		
Auxiliary Machinery Repairs,	24.39		
General Expenses (Telegrams, Dues L. C. A., &c)	237.41		
Laying Up,	1423.81	61707.07	.5533
Net earnings,		\$16301.65	\$.1462
Less amt. charged to Owners Propn. of Loss,		339.46	
Making total net gain for Season 1905,		\$15962.19	

NOTE:The cost per ton to operate after eliminating Extraordinary and General Repairs Account is \$.5267 in 1905 and \$.5306 in 1904.

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2-20-06

PIONEER AND CHATTANOOGA - COMBINED.

COMPARISONS.

	1 9 0 4	1 9 0 5
Gross Receipts,	⌘53581.45	⌘78008.72
Gross Expenditures,	48666.01	61707.07
Net Earnings,	⌘ 4915.44	⌘16301.65
Percentage of operations to earnings,	90.8	79.1
Gross earnings per ton freight carried,	⌘.6500	⌘.6995
Operating expenses per ton freight carried,	.5904	.5533
Net earnings per ton freight carried,	⌘.0596	⌘.1462
Cost per ton to operate after eliminating Ex. & Gen. Rprs.	⌘.5306	⌘.5267
Gross earnings per mile traveled,	⌘2.7454	⌘3.1554
Operating expenses per mile traveled,	2.4935	2.4960
Net earnings per mile traveled,	⌘ .2519	⌘ .6594
Gross earnings per day,	⌘307.94	⌘364.52
Operating expenses per day,	279.69	288.35
Net earnings per day,	⌘ 28.25	⌘ 76.17
Expenses per day excluding cargo handling costs,	⌘178.40	⌘173.49
Expenses per day exclud. cargo hdlg. costs and Ex. & Gen. Rprs.	⌘149.83	⌘159.60
Average wages paid per day while in commission,	⌘ 44.22	⌘ 47.85
Cost provisions per man per day (excluding extra meals),	⌘ .361	⌘ .352

LGM THB  
2-20-06

ANNUAL REPORT  
OF  
STEAMER FALCON  
1905.

S T E A M E R F A L C O N .

GENERAL OPERATIONS.

The Steamer FALCON left Cleveland with coal cargo on first trip of Season 1905 on April 20th, and arrived at Cleveland ready to go into winter quarters on December 9th, having therefore been in commission 233 days.

This Steamer was chartered by the Boyne City Charcoal Iron Co. for the transportation of iron ore from the port of Escanaba, Mich., to their furnace plant at Boyne City, and was engaged almost exclusively in that trade.

Altogether 47 cargoes were transported to Boyne City, one cargo to Elk Rapids, and one cargo to Cleveland. On the last two trips of the season pig iron cargoes were carried from the ports of Marquette and Elk Rapids to Buffalo.

Three coal cargoes were taken on upbound trips for delivery at the ports of Milwaukee, Escanaba and Munising. The FALCON carried 55544 gross tons of freight for the season, traveling 15563 miles.

The average rate of freight received on all cargoes carried during the season was \$.3462 per gross ton. The average cost per gross ton of freight carried was \$.2705. The average net earnings therefore are \$.0757 per gross ton as compared with \$.0629 in previous year.

LGM THE  
2-16-06

S T E A M E R F A L C O N .

GENERAL REPAIRS.

The General Repairs on this Steamer for the past season were of the usual character present every year on a boat of her age.

The Steamer, however, will have to be given considerable repair before going to sea another season. It may be that the hull repairs will aggregate \$1200.00 to \$1500.00. Among the things that will require attention may be mentioned the following:

The false stem has been showing weakness for several years. It has been watched carefully but it has now got to a point where it will have to be renewed. In putting in the new stem there will have to be some new stem irons.

This work will of course necessitate drydocking, at which time advantage will be taken to remove the centerboard from this Steamer. Since we have owned this boat the centerboard has been allowed to remain, not because of any particular value to us, but now that the center board box is leaking it will be cheaper to drop the centerboard box out and refill the bottom than to repair the box.

Some new planking will be required on the topsides.

A number of feet of new stringer both on the port and starboard sides.

Forty or fifty new stanchions on port and starboard sides.

Considerable new bulwarks.

New iron timber heads abreast of No. 1 Hatch.

Spar deck patched in numerous places, and new decking in middle house.

Some new spar deck beams; also some new beams abreast of center board box in cargo hold.

S T E A M E R F A L C O N .

GENERAL REPAIRS - 2.

Keelson repaired where worn and splintered in the handling of pig iron.

New covers for all four hatches.

New ice box.

Also many other small items that go to make up the aggregate of repairs on a wooden boat.

The H. P. valve face and cylinder on engine are badly cut, and it will be necessary to remove the H. P. cylinder to be re-bored. This will have to be replaced, and false face pinned on; also new valve front. Two new rings will be furnished for pistons and piston rod valve stem turned up. The cost of this repair will approach \$150.00.

JHS THB

2-21-06

S T E A M E R F A L C O N .

ACCIDENTS.

CLEVELAND, APRIL 17, 1905, TRIP 1:

While lying at the Ellsworth Coal Dock on the morning of April 17th, the Steamer MARITANA had a line on a timber head of the FALCON, near the boiler house, for the purpose of checking into the slip at the coal dock, and in doing so the MARITANA carried away the chock, two stanchions and a small portion of the bulwarks. The cost of the repair was \$7.30. The amount was so small that no claim was made on the owners of the MARITANA.

CHARLEVOIX CHANNEL, APRIL 30, 1905, TRIP 1:

The Steamer sailed from Escanaba April 29th bound for Boyne City with a cargo of iron ore. She arrived off the port of Charlevoix the morning of April 30th and entered the canal between Lake Michigan and Pine Lake. Very shortly after entering the canal the Steamer ran aground. During the winter bars had formed in the canal and the Steamer struck on one of these. The Tug Taylor of Charlevoix came to her assistance, and after lightering about 100 tons of ore the tug pulled on her and she was released. This became a claim under General Average on the underwriters of the vessel, the total amount of same being \$155.43

ENTRANCE TO GREEN BAY, JULY 7, 1905, TRIP 22:

About 3:00 A.M. this date while the FALCON was being navigated in a thick fog at slow speed, bound for Escanaba from Boyne City, she brought up on Gravley Island Shoal, on a flat rock bottom. Efforts were made to release the Steamer by her own power but without success. Word was sent by a passing steamer to Escanaba for a tug to come to the assistance of the FALCON. At 5:00 P.M. the Tug McDonald arrived, but was drawing too much water to get near enough to pass a line, and the fishing tug Cisco was secured to run a line. The



STEAMER FALCON.

ACCIDENTS - 2.

lines parted and it was thought they would not be able to release the Steamer. The Tug Favorite was sent for, as the place where the FALCON was stranded was exposed and she was in danger of rising sea and wind; however, before the Favorite arrived, the McDonald with the assistance of the Cisco succeeded in releasing the Steamer at about 11:40 A.M. on the 8th. It was not thought that any particular damage was done to the vessel's bottom. The cost of the wrecking operations amounted to \$1488.21, which amount became a claim on the underwriters of the Steamer.

CHARLEVOIX, AUGUST 15, 1905, TRIP 33:

The Steamer was bound from Boyne City to Escanaba. Just before entering the railroad bridge at Charlevoix, two small yachts tried to get through the bridge ahead of the Steamer. To avoid running over them the FALCON stopped and backed. While doing so the wheel got away from the wheelsman, went over with great force, parting the wheel cable. The wind was blowing from the north and drifted the boat onto a sand bar. After putting in a new wheel cable which was carried on board, the sand was dredged out sufficiently to permit the Steamer to release herself.

SOUTH FOX SHOAL, AUGUST 19, 1905, TRIP 34:

The Steamer was bound from Escanaba to Elk Rapids laden with a cargo of ore. When the Steamer was off Poverty Island about 1:00 P.M. a thick fog set in; the engines were checked and soundings taken. The Steamer was navigating carefully, when she suddenly brought up on a narrow ridge of small rocks off South Fox Island. An effort was made to back off with her own power but this was found to be impossible. The captain went ashore, and took a steam launch to North Port

S T E A M E R F A L C O N .

ACCIDENTS - 3.

where the Tug Favorite was sent for. The Favorite arrived at noon August 20th, and after getting a line on the FALCON endeavored to release her, but was unsuccessful. With 10 men from the Favorite and five men from the crew of the FALCON 125 tons of ore was jettisoned. The Favorite then pulled on the FALCON again and succeeded in releasing her in the neighborhood of 3:00 P.M. August 21st. The Steamer proceeded to her destination, discharged her cargo, and then went to the Milwaukee Dry Dock Co., Milwaukee, for repairs.

The General and Particular Average claim growing out of this accident amounted to \$3062.95.

On examination in dry dock it was found that the Steamer sustained considerable damage to her bottom. The planking from midships forward and aft of same, to turn of bilge on each side, was damaged; the keel was damaged and broken. Seams and butts throughout the bottom more or less started. Stern post leaking in way of stern pipe. Seams and butts in way of covering board more or less started. Hatch coamings started in the deck. In addition to the above the Steamer lost 38½ hours while aground and 218½ hours at Milwaukee making repairs, a total of 256½ hours lost time.

ELK RAPIDS, NOVEMBER 29, 1905, TRIP 51:

While lying at the dock at Elk Rapids in a gale of wind, the Steamer surged so at the dock that she broke off one of the chocks on the port side, the bolts that held same pulling out, splintering the covering board in this location. Same will be repaired when winter repairs are being made. The amount of the cost will be small, but the matter is mentioned for record.

S T E A M E R F A L C O N .

	1 9 0 4		1 9 0 5	
	DAYS	PER CENT	DAYS	PER CENT
Time in port,	96½	57.1	138	59.2
Time sailing,	68½	40.5	70¾	30.4
Time lost by bad weather, fog and low water,	3	1.8	10¼	4.4
Time lost waiting at Soo Canal and River,	1	.6	½	.1
Time lost by accidents,	---	-----	13¾	5.9
Total time in commission,	169	100.0	233	100.0
Number of trips made,	11		51	
Number of cargoes carried,	22		54	

PERCENTAGES OF TIME IN COMMISSION IN PORT.

Season 1901.....56.9  
 Season 1902.....54.9  
 Season 1903.....53.1  
 Season 1904.....57.1  
 Season.1905.....59.2

LGM THE  
2-17-06

S T E A M E R F A L C O N .

OPERATING ACCOUNT.

<u>RECEIPTS.</u>	GROSS TONS	AMOUNT	PER GROSS TON FREIGHT CARRIED
47 cargoes iron ore Escanaba to Boyne City,	48843	\$14652.67	\$.3000
1 cargo iron ore Escanaba to Elk Rapids,	909	318.00	.3500
1 cargo iron ore Escanaba to Cleveland,	1042	625.20	.6000
1 cargo pig iron Marquette to Buffalo,	1000	850.00	.8500
1 cargo pig iron Elk Rapids to Buffalo,	984	836.40	.8500
1 cargo coal to Milwaukee (1111 net tons @ 50 cents)	992	555.63	.5601
1 cargo coal to Munising (949 net tons @ 70 cents)	847	664.54	.7845
1 cargo coal to Escanaba (1038 net tons @ 70 cents)	927	726.74	.7845
54	55544	\$19229.18	\$.3462
<u>DISBURSEMENTS.</u>			
Extraordinary and General Repairs,	\$ 520.04		
Ship Keeping and Winter Dockage,	46.66		
Fitting Out,	554.85		
Wages and Captain's Salary,	6571.05		
Captain's Expense Account,	126.96		
Handling Cargoes,	1416.38		
Taxes,	97.84		
Marine Insurance,	1035.00		
Freight List Insurance,	51.01		
Mates Supplies,	185.11		
Provisions,	1055.85		
Steward's Supplies,	107.66		
Fuel,	2552.16		
Engineer's Lubricants,	67.25		
Engineer's Supplies,	41.46		
Boiler Repairs,	3.90		
Machinery Repairs,	70.50		
General Expenses (Telegrams, Dues L. C. A., &c.)	65.89	15026.50	.2705
Laying Up	456.93		
Net earnings,		\$ 4202.68	\$.0757
Add amt. credited to Owners Propn. of Loss,		339.20	
Add amt. received for pulling on Str. CHOCTAW while stranded on Manitou Island, Sept. 8, 1904 delivering steam pump, etc.,		450.00	
Making total net gain for Season 1905,		\$ 4991.88	

NOTE: The cost per ton to operate after eliminating Extraordinary and General Repair Account is \$.2612 in 1905 and \$.5256 in 1904.

LGM THB  
2-17-06

S T E A M E R F A L C O N .

STATEMENT SHOWING DEBITS AND CREDITS TO ACCOUNT OF OWNERS PROPORTION OF LOSS  
FOR SEASON 1905.

DAMAGE BY STEAMER MARITANA, APRIL 17, 1905:

The Steamer Maritana moving into slip at Ellsworth Coal Co's. dock on this date had a line on FALCON'S timber head. The strain carried away FALCON'S chalk, two stanchions, and a small portion of the bulwarks. Repairs were made at a cost of,

7.30

STRANDING AT CHARLEVOIX, APRIL 30, 1905:

CREDITS:

Amount allowed for telegrams,	\$ 3.08
Amount allowed for protest fee,	5.00
Total credit,	\$ 8.08

STRANDING ON GRAVELEY ISLAND, JULY 7, 1905:

CREDITS:

Contract discount (20%) allowed by Great Lakes Towing Co. for tug service,	\$201.00
Amt. allowed by Ins. Co. for protest fee,	2.00
Amt. allowed by Ins. Co. for telegrams,	3.35
Amt. allowed by Ins. Co. for coal bill,	<u>12.00</u>
	218.35

DEBIT:

Less amount not allowed for rope,	<u>19.93</u> 198.42
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STRANDING ON SOUTH FOX ISLAND, AUGUST 20, 1905:

CREDIT:

Contract discount (20%) allowed by Great Lakes Towing Co. for tug service,	<u>140.00</u>
Total credits,	<u>346.50</u>
Net credit to Owners Proportion of Loss,	<u>\$339.20</u>

LGM THB  
2-17-06

S T E A M E R F A L C O N .

COMPARISONS.

	1 9 0 4	1 9 0 5
Days in commission,	169	233
Number of miles traveled,	15851	16563
Number of trips made,	11	51
Number cargoes freight carried,	22	54
Gross tons freight carried,	21697	55544
Average rate freight per gross ton,	\$.6096	\$.3462
Average cost to carry per gross ton freight,	.5467	.2705
Net earnings per ton freight carried,	\$.0629	\$.0757
Cost per ton to operate after eliminating Ex. & Gen. Rprs.	\$.5256	\$.2612
Gross Receipts,	\$13226.27	\$19229.18
Gross Expenditures,	11862.66	15026.50
Net Earnings,	\$ 1363.61	\$ 4202.68
Percentage of operations to earnings,	89.7	78.1
Gross earnings per mile traveled,	\$.8344	\$1.1609
Operating expenses per mile traveled,	.7484	.9072
Net earnings per mile traveled,	\$.0860	\$.2537
Gross earnings per day,	\$78.26	\$82.53
Operating expenses per day,	70.19	64.49
Net earnings per day,	\$ 8.07	\$18.04
Expenses per day excluding cargo handling costs	\$66.90	\$58.41
Expenses per day exclud. cargo hdlg. costs and Ex. & Gen. Rprs.	\$64.19	\$56.18
Cost provisions per man per day, (excluding extra meals)	\$.383	\$.332
Average lbs. coal consumed per hour steamed,	1051	1062
Average lbs. coal consumed per mile steamed,	109	109
Average cost coal consumed per mile steamed,	\$.1329	\$.1541
Average cost oil consumed per hour steamed,	\$.0402	\$.0397
Average cost oil consumed per mile steamed,	\$.00419	\$.00429
Average wages paid per day while in commission,	\$25.29	\$24.72
Average days per trip (Coal up - pig iron down),	15½	-----
Average days per trip (Iron ore Escanaba to Boyne City),	-----	3½
Average number of miles per hour - light,	11.23	10.76
Average number miles per hour - loaded,	9.50	9.29
General average number miles per hour,	9.62	9.77
Average gross tons in pig iron and ore cargoes,	1006	1035
Average draft water on pig iron and ore cargoes,	(14'8" Ford 15'5" Aft	(15' Ford 15'2" Aft
Average mean draft water on pig iron and ore cargoes,	15'½"	15'1"
Average net tonnage of coal cargoes,	1094	1033
Average draft water on coal cargoes,	(14'9" Ford 15'4" Aft	(14'4" Ford 15'3" Aft
Average mean draft water on coal cargoes,	15'	14'9"

LGM THB  
2-17-06

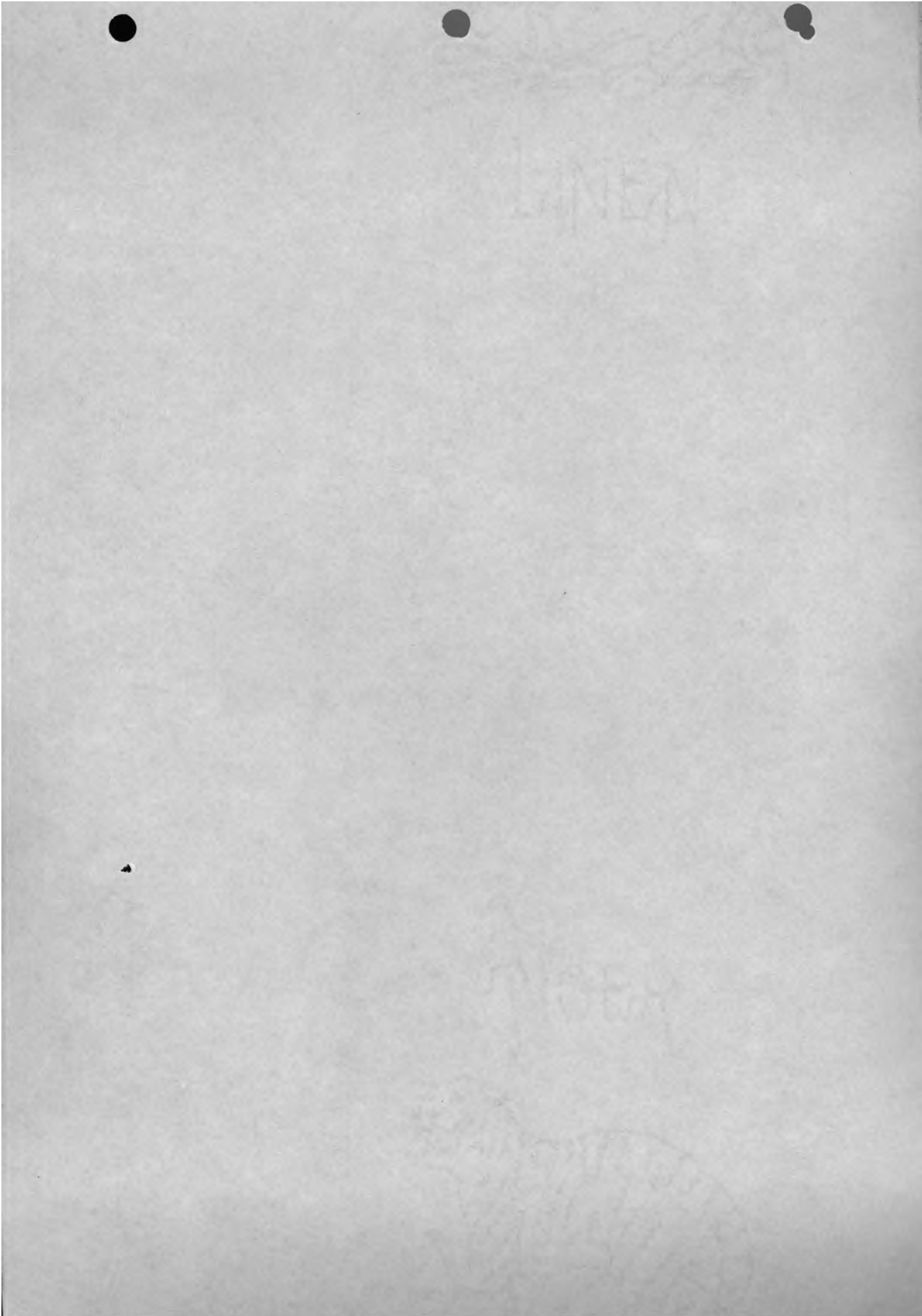
STEAMER FALCON.

COMPARISON OF ITEMS OF DISBURSEMENT.

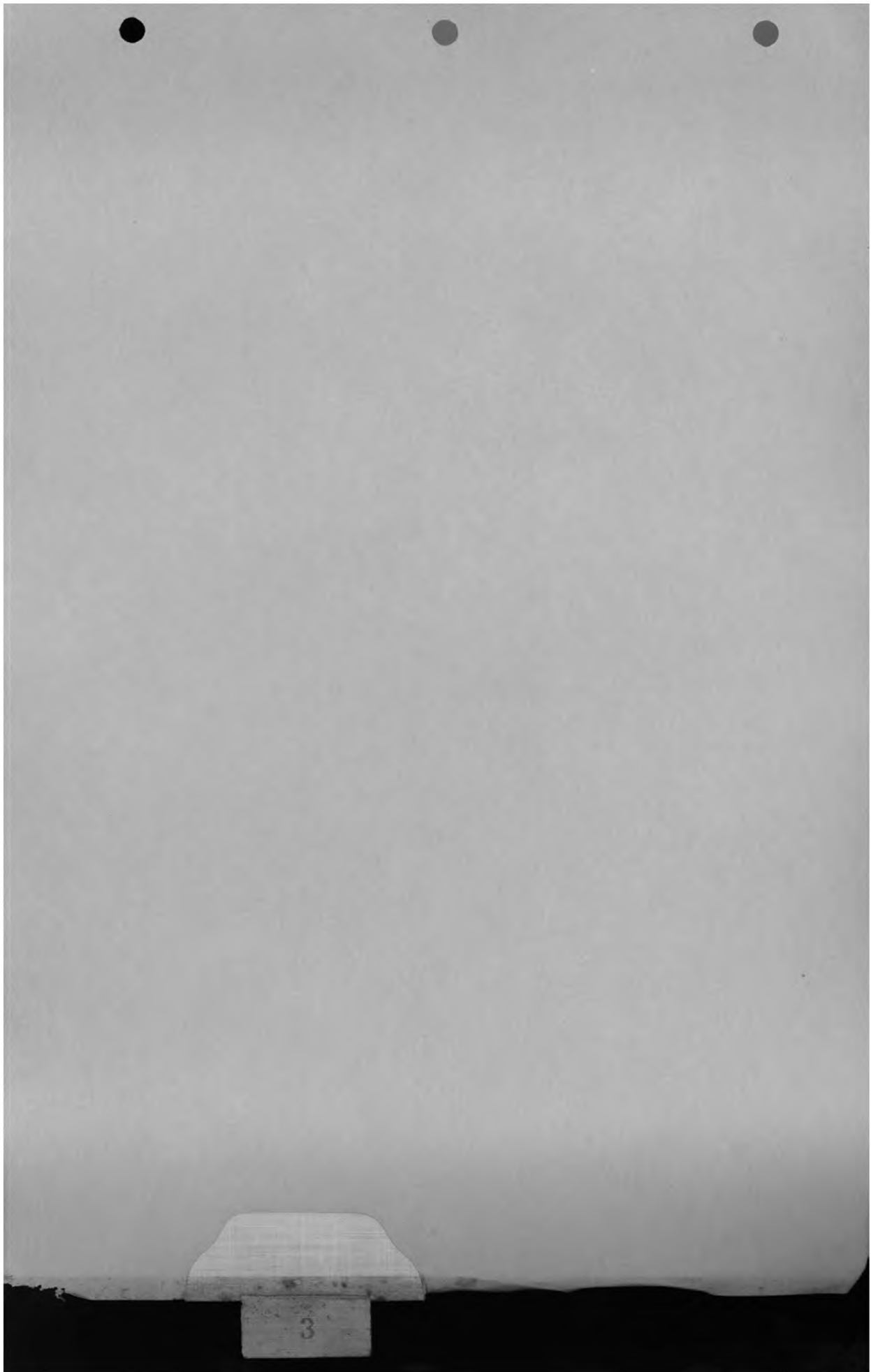
	1904	1905	+ OR -	REMARKS
Extraordinary & General Repairs	458.15	520.04	+ 61.89	
Ship Keeping and Winter Dockage	71.00	46.66	- 24.34	
Fitting out	578.01	554.85	- 24.16	
Wages & Captains Salary	5,088.75	6,571.05	+ 1,482.30	Rate of wages was same both years, but season 1905 was 64 days longer than 1904.
Captains Expense Account	36.28	126.96	+ 90.68	
Tug Services	17.95		- 17.95	
Handling Cargoes	555.55	1,416.38	+ 860.83	In 1904 carried 11,071 tons pig iron on which trimming charge only of 5¢ per ton was paid, while in 1905 carried 52,778 tons ore and pig iron free to vessel.
Taxes	85.07	97.84	+ 12.77	
Marine Insurance	826.41	1,035.00	+ 208.59	Valuation increased \$1,500.00 in 1905: the lessened premium in 1904 is largely due to rebate received on account lay-up returns for short season that year.
Freight list Insurance	46.75	51.01	+ 4.26	
Mates Supplies	112.73	185.11	+ 72.38	
Provisions	856.53	1,055.85	- 161.77	Based on decreased cost of \$.051 per man per day.
Stewards Supplies	80.65	107.66	+ 27.01	
Fuel	2,106.35	2,552.16		Consumption of fuel per mile run was the same for both years.
Engineers Lubricants	66.29	67.25	+ 1.65	Based on increased cost of \$.0061 per mile run..
Engineers Supplies	66.13	41.46	- 24.67	
Boiler Repairs	15.60	3.90	- 11.70	
Machinery Repairs	44.37	70.50	+ 26.13	
Auxiliary Machinery Repairs	3.00		- 3.00	
General Expenses	295.57	65.89	- 229.68	In 1904 H. S. Connell, Chief Engineer received 1st prize, \$100.00 for lowest fuel consumption in 1903, and Capt. J. C. Dobson received reward of \$100.00 for brig ing steamer through season without accident.
Laying up	450.52	456.93	+ 6.41	

LGM-WAH

2/16/06







S T E A M E R F A L C O N .

GENERAL OPERATIONS.

The Steamer FALCON left Cleveland with coal cargo on first trip of Season 1905 on April 20th, and arrived at Cleveland ready to go into winter quarters on December 9th, having therefore been in commission 233 days.

This Steamer was chartered by the Boyne City Charcoal Iron Co. for the transportation of iron ore from the port of Escanaba, Mich., to their furnace plant at Boyne City, and was engaged almost exclusively in that trade.

Altogether 47 cargoes were transported to Boyne City, one cargo to Elk Rapids, and one cargo to Cleveland. On the last two trips of the season pig iron cargoes were carried from the ports of Marquette and Elk Rapids to Buffalo.

Three coal cargoes were taken on upbound trips for delivery at the ports of Milwaukee, Escanaba and Munising. The FALCON carried 55544 gross tons of freight for the season, traveling 15563 miles.

The average rate of freight received on all cargoes carried during the season was \$ .3462 per gross ton. The average cost per gross ton of freight carried was \$ .2705. The average net earnings therefore are \$ .0757 per gross ton as compared with \$ .0629 in previous year.

LGM THB  
2-16-06

S T E A M E R F A L C O N .

GENERAL REPAIRS.

The General Repairs on this Steamer for the past season were of the usual character present every year on a boat of her age.

The Steamer, however, will have to be given considerable repair before going to sea another season. It may be that the hull repairs will aggregate \$1200.00 to \$1500.00. Among the things that will require attention may be mentioned the following:

The false stem has been showing weakness for several years. It has been watched carefully but it has now got to a point where it will have to be renewed. In putting in the new stem there will have to be some new stem irons.

This work will of course necessitate drydocking, at which time advantage will be taken to remove the centerboard from this Steamer. Since we have owned this boat the centerboard has been allowed to remain, not because of any particular value to us, but now that the center board box is leaking it will be cheaper to drop the centerboard box out and refill the bottom than to repair the box.

Some new planking will be required on the topsides.

A number of feet of new stringer both on the port and starboard sides.

Forty or fifty new stanchions on port and starboard sides.

Considerable new bulwarks.

New iron timber heads abreast of No. 1 Hatch.

Spar deck patched in numerous places, and new decking in middle house.

Some new spar deck beams; also some new beams abreast of center board box in cargo hold.

S T E A M E R F A L C O N .

GENERAL REPAIRS - 2.

Keelson repaired where worn and splintered in the handling of pig iron.

New covers for all four hatches.

New ice box.

Also many other small items that go to make up the aggregate of repairs on a wooden boat.

The H. P. valve face and cylinder on engine are badly cut, and it will be necessary to remove the H. P. cylinder to be re-bored. This will have to be replaced, and false face pinned on; also new valve front. Two new rings will be furnished for pistons and piston rod valve stem turned up. The cost of this repair will approach \$150.00.

JHS THB

2-21-06

STEAMER FALCON.

PAINTING.

The important parts of the Steamer painted during  
Season 1905 are as follows:

RED METALLIC PASTE:

Outside of hull, above load line - 3 coats,  
Outside of hull, below load line - 1 coat,  
Forward deck - 1 coat,  
Forward cabin roof and pilot house roof - 2 coats,  
Hatch covers - 1 coat,  
Hatch coamings, outside - 1 coat,  
Deck house roof - 2 coats,  
Boiler house roof - 2 coats,  
After cabin roof - 2 coats,  
Deck aft of engine room - 1 coat.

TINTED LEAD NO.13:

Forward cabin and pilot house - 3 coats,  
Deck house - 3 coats,  
Boiler house - 1 coat,  
After cabin - 2 coats,  
Spars - 2 coats,  
Wood work aft of engine room - 1 coat,  
Walls of 7 sleeping rooms - 1 coat,  
Engine room sides - 1 coat  
Compound room - 1 coat.

WHITE LEAD:

Ceilings of 7 sleeping rooms - 1 coat,  
Ceiling of dining room - 3 coats,  
Ceiling of kitchen - 2 coats.

LGM THB  
2-17-06

STEAMER FALCON.

	1904		1905	
	DAYS	PER CENT	DAYS	PER CENT
Time in port,	96½	57.1	138	59.2
Time sailing,	68½	40.5	70¾	30.4
Time lost by bad weather, fog and low water,	3	1.8	10½	4.4
Time lost waiting at See Canal and River,	1	.6	½	.1
Time lost by accidents,	---	-----	13¾	5.9
Total time in commission,	169	100.0	233	100.0
Number of trips made,	11		51	
Number of cargoes carried,	22		54	

PERCENTAGES OF TIME IN COMMISSION IN PORT.

Season 1901.....56.9  
 Season 1902.....54.9  
 Season 1903.....53.1  
 Season 1904.....57.1  
 Season.1905.....59.2

LGM THE  
2-17-06

S T E A M E R F A L C O N .

O P E R A T I N G A C C O U N T .

RECEIPTS.	GROSS TONS	AMOUNT	PER GROSS TON FREIGHT CARRIED
47 cargoes iron ore Escanaba to Boyne City,	48843	\$14652.67	\$.3000
1 cargo iron ore Escanaba to Elk Rapids,	909	318.00	.3500
1 cargo iron ore Escanaba to Cleveland,	1042	625.20	.6000
1 cargo pig iron Marquette to Buffalo,	1000	850.00	.8500
1 cargo pig iron Elk Rapids to Buffalo,	984	836.40	.8500
1 cargo coal to Milwaukee (1111 net tons @ 50 cents)	992	555.63	.5601
1 cargo coal to Munising (949 net tons @ 70 cents)	847	664.54	.7845
1 cargo coal to Escanaba (1038 net tons @ 70 cents)	927	726.74	.7845
54	55544	\$19229.18	\$.3462
<u>DISBURSEMENTS.</u>			
Extraordinary and General Repairs,	\$ 520.04		
Ship Keeping and Winter Dockage,	46.66		
Fitting Out,	554.85		
Wages and Captain's Salary,	6571.05		
Captain's Expense Account,	126.96		
Handling Cargoes,	1416.38		
Taxes,	97.84		
Marine Insurance,	1035.00		
Freight List Insurance,	51.01		
Mates Supplies,	185.11		
Provisions,	1055.85		
Steward's Supplies,	107.66		
Fuel,	2552.16		
Engineer's Lubricants,	67.25		
Engineer's Supplies,	41.46		
Boiler Repairs,	3.90		
Machinery Repairs,	70.50		
General Expenses (Telegrams, Dues L. C. A., &c.)	65.89	15026.50	.2705
Laying up Net earnings,	456.93	\$ 4202.68	\$.0757
Add amt. credited to Owners Propn. of Loss,		339.20	
Add amt. received for pulling on Str. CHOCTAW while stranded on Manitou Island, Sept. 8, 1904 delivering steam pump, etc.,		450.00	
Making total net gain for Season 1903,		\$ 4991.88	

NOTE: The cost per ton to operate after eliminating Extraordinary and General Repair Account is \$.2612 in 1905 and \$.5256 in 1904.

LGM THB  
2-17-06

S T E A M E R F A L C O N .

STATEMENT SHOWING DEBITS AND CREDITS TO ACCOUNT OF OWNERS PROPORTION OF LOSS  
FOR SEASON 1905.

DAMAGE BY STEAMER MARITANA, APRIL 17, 1905:

The Steamer Maritana moving into slip at Ellsworth Coal Co's. deck on this date had a line on FALCON'S timber head. The strain carried away FALCON'S chalk, two stanchions, and a small portion of the bulwarks. Repairs were made at a cost of,

7.30

STRANDING AT CHARLEVOIX, APRIL 30, 1905:

CREDITS:

Amount allowed for telegrams,	\$ 3.08
Amount allowed for protest fee,	5.00
Total credit,	\$ 8.08

STRANDING ON GRAVELEY ISLAND, JULY 7, 1905:

CREDITS:

Contract discount (20%) allowed by Great Lakes Towing Co. for tug service,	\$201.00
Amt. allowed by Ins. Co. for protest fee,	2.00
Amt. allowed by Ins. Co. for telegrams,	3.35
Amt. allowed by Ins. Co. for coal bill,	12.00
	<u>218.35</u>

DEBIT:

Less amount not allowed for rope,	<u>19.93 198.42</u>
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STRANDING ON SOUTH FOX ISLAND, AUGUST 20, 1905:

CREDIT:

Contract discount (20%) allowed by Great Lakes Towing Co. for tug service,	<u>140.00</u>
Total credits,	<u>346.50</u>
Net credit to Owners Proportion of Loss,	<u>\$339.20</u>

LGM THB  
2-17-06



S T E A M E R F A L C O N .

COMPARISONS.

	1 9 0 4	1 9 0 5
Days in commission,	169	233
Number of miles traveled,	15851	16563
Number of trips made,	11	51
Number cargoes freight carried,	22	54
Gross tons freight carried,	21697	55544
Average rate freight per gross ton,	\$.6096	\$.3462
Average cost to carry per gross ton freight,	.5467	.2705
Net earnings per ton freight carried,	\$.0629	\$.0757
Cost per ton to operate after eliminating Ex. & Gen. Rprs.	\$.5256	\$.2612
Gross Receipts,	\$13226.27	\$19229.18
Gross Expenditures,	11862.66	15026.50
Net Earnings,	\$ 1363.61	\$ 4202.68
Percentage of operations to earnings,	89.7	78.1
Gross earnings per mile traveled,	\$.8344	\$1.1609
Operating expenses per mile traveled,	.7484	.9072
Net earnings per mile traveled,	\$.0860	\$.2537
Gross earnings per day,	\$78.26	\$82.53
Operating expenses per day,	70.19	64.49
Net earnings per day,	\$ 8.07	\$18.04
Expenses per day excluding cargo handling costs	\$66.90	\$58.41
Expenses per day exclud. cargo hdlg. costs and Ex. & Gen. Rprs.	\$64.19	\$56.18
Cost provisions per man per day, (excluding extra meals)	\$.383	\$.332
Average lbs. coal consumed per hour steamed,	1051	1062
Average lbs. coal consumed per mile steamed,	109	109
Average cost coal consumed per mile steamed,	\$.1329	\$.1541
Average cost oil consumed per hour steamed,	\$.0402	\$.0397
Average cost oil consumed per mile steamed,	\$.00419	\$.00429
Average wages paid per day while in commission,	\$25.29	\$24.72
Average days per trip (Coal up - pig iron down),	15½	-----
Average days per trip (Iron ore Escanaba to Boyne City),	-----	3½
Average number of miles per hour - light,	11.23	10.76
Average number miles per hour - loaded,	9.50	9.29
General average number miles per hour,	9.62	9.77
Average gross tons in pig iron and ore cargoes,	1006	1035
Average draft water on pig iron and ore cargoes,	(14'8" Ford 15'5" Aft	(15' Ford 15'2" Aft
Average mean draft water on pig iron and ore cargoes,	15'½"	15'1"
Average net tonnage of coal cargoes,	1094	1033
Average draft water on coal cargoes,	(14'9" Ford 15'4" Aft	(14'4" Ford 15'3" Aft
Average mean draft water on coal cargoes,	15'	14'9"

LGM THB  
2-17-06

STEAMER FALCON.

COMPARISON OF ITEMS OF DISBURSEMENT.

	1904	1905	+ OR -	REMARKS
Extraordinary & General Repairs	\$ 458.15	\$ 520.04	+\$ 61.89	
Ship Keeping and Winter Dockage	71.00	46.66	- 24.34	
Fitting out	579.01	554.65	- 24.16	
Wages & Captains Salary	5,088.75	6,571.05	+ 1,482.30	Rate of wages was same both years, but season 1905 was 64 days longer than 1904.
Captains Expense Account	36.28	126.96	+ 90.68	
Tug Services	17.95		- 17.95	
Handling Cargoes	555.55	1,416.38	+ 860.83	In 1904 carried 11,071 tons pig iron on which trimming charge only of 5¢ per ton was paid, while in 1905 carried 52,778 tons ore and pig iron free to vessel.
Taxes	85.07	97.84	+ 12.77	
Marine Insurance	826.41	1,035.00	+ 208.59	Valuation increased \$1,500.00 in 1905; the lessened premium in 1904 is largely due to rebate received on account lay-up returns for short season that year.
Freight list Insurance	46.75	51.01	+ 4.26	
Mates Supplies	112.73	185.11	+ 72.38	
Provisions	856.53	1,055.85	- 161.77	Based on decreased cost of \$.051 per man per day.
Stewards Supplies	80.65	107.66	+ 27.01	
Fuel	2,106.35	2,552.16		Consumption of fuel per mile run was the same for both years.
Engineers Lubricants	66.29	67.25	+ 1.65	Based on increased cost of \$.0661 per mile run.
Engineers Supplies	66.13	41.46	- 24.67	
Boiler Repairs	15.60	3.90	- 11.70	
Machinery Repairs	44.37	70.50	+ 26.13	
Auxiliary Machinery Repairs	3.00		- 3.00	
General Expenses	295.57	65.89	- 229.68	In 1904 H. S. Connell, Chief Engineer received 1st prize, \$100.00 for lowest fuel consumption in 1903, and Capt. J. C. Dobson received reward of \$100.00 for bringing steamer through season without accident.
Laying up	450.52	456.93	+ 6.41	

LGM-WAH

2/16/06

4  
PIONEER AND CHATTANOOGA - COMBINED.

<u>RECEIPTS.</u>	GROSS TONS	AMOUNT	PER GROSS TON FREIGHT CARRIED
<u>F r e i g h t s,</u>	111518	\$78008.72	\$.6995
<u>DISBURSEMENTS.</u>			
Extraordinary and General Repairs,	\$ 2972.22		
Ship Keeping and Winter Dockage,	151.50		
Fitting Out,	1232.25		
Wages and Captain's Salary,	12769.33		
Captain's Expense Account,	63.38		
Tug Services,	3299.92		
Handling Cargoes,	24579.66		
Taxes,	658.79		
Marine Insurance,	4261.00		
Freight List Insurance,	56.18		
Mates Supplies,	1298.16		
Provisions,	2167.49		
Steward's Supplies,	217.20		
Passenger Cabin Equipment,	4.25		
Fuel,	5726.05		
Engineer's Lubricants,	145.52		
Engineer's Supplies,	203.12		
Boiler Repairs,	157.84		
Machinery Repairs,	57.60		
Auxiliary Machinery Repairs,	24.39		
General Expenses (Telegrams, Dues L. C. A., &c)	237.41		
Laying Up,	1423.81	61707.07	.5533
Net earnings,		\$16301.65	\$.1462
Less amt. charged to Owners Propn. of Loss,		339.46	
Making total net gain for Season 1905,		\$15962.19	

NOTE: The cost per ton to operate after eliminating Extraordinary and General Repairs Account is \$.5267 in 1905 and \$.5306 in 1904.

LGM THB  
2-20-06

PIONEER AND CHATTANOOGA - COMBINED.

COMPARISONS.

	1 9 0 4	1 9 0 5
Gross Receipts,	\$53561.45	\$78008.72
Gross Expenditures,	48666.01	61707.07
Net Earnings,	\$ 4915.44	\$16301.65
Percentage of operations to earnings,	90.8	79.1
Gross earnings per ton freight carried,	\$ .6500	\$ .6995
Operating expenses per ton freight carried,	.5904	.5533
Net earnings per ton freight carried,	\$ .0596	\$ .1462
Cost per ton to operate after eliminating Ex. & Gen. Rprs.	\$ .5306	\$ .5267
Gross earnings per mile traveled,	\$2.7434	\$3.1554
Operating expenses per mile traveled,	2.4935	2.4960
Net earnings per mile traveled,	\$ .2519	\$ .6594
Gross earnings per day,	\$307.94	\$364.52
Operating expenses per day,	279.69	288.35
Net earnings per day,	\$ 28.25	\$ 76.17
Expenses per day excluding cargo handling costs,	\$178.40	\$173.49
Expenses per day exclud. cargo hdlg. costs and Ex. & Gen. Rprs.	\$149.83	\$159.60
Average wages paid per day while in commission,	\$ 44.22	\$ 47.85
Cost provisions per man per day (excluding extra meals),	\$ .361	\$ .352

LGM THB  
2-20-06

4

S C H O O N E R   C H A T T A N O O G A .

GENERAL OPERATIONS.

The Schooner CHATTANOOGA sailed from the port of Cleveland on first trip of season 1905 on April 20th, and arrived at Cleveland ready to go into winter quarters on November 2nd, having therefore been in commission 196 days.

This vessel made 18 round trips for the season transporting iron ore from Marquette, Mich., to Lake Erie ports, being towed by the PIONEER every trip. The upbound trips were made going light. The CHATTANOOGA traveled a total distance of 21,579 miles, carrying 72,110 gross tons of freight.

The average rate of freight received was the established season rate of \$.7000 per gross ton. This as against \$.6500 per ton received in previous year.

The average cost to carry per gross ton of freight was \$.5941 in 1905 and \$.5983 in 1904. The average net earnings per gross ton, therefore, are \$.1059 in 1905 as compared with \$.0517 in preceding year.

LGH THB  
2-20-06

S C H O O N E R C H A T T A N O O G A .

GENERAL REPAIRS.

The total amount of General Repairs expended on this vessel for the Season 1905 was not large, the aggregate being but \$996.71.

The most important item was the calking of the outside from light water line up to one seam above the loading line, or 15 seams in all on each side. The outside thread of oakum was decayed and could not be horsed in, and so they had to reef it out, and then calk in two threads of new oakum. The cost of this work was \$481.90.

Before going to sea another season some very important repairs will have to be made on this vessel the cost of which repairs will be large.

The underwriters will bear the cost of the repairs on account of the damage sustained in the accident on Lake Hiron October 17, 1905, wherein in stress of weather the following damage was done:

On both the port and starboard sides between the main and mizzen masts, the covering board and solid bulwarks were cracked through, the scarphs of same being more or less pulled. The deck planking between the covering board and the hatch coamings broken practically across the ship. The calking of the topside planking between deck ceilings on both sides, also decks and coamings, shew evidences of movement, especially at the butts and scarphs, and will have to be rectified.

This vessel was built in 1898 at the James Davidson Ship Yard, West Bay City, Mich. Although not old, a careful examination of the ship in opening her up to make repairs, shows that the oak used in her construction was of the most inferior quality, much of the timber being pronounced by those

S C H O O N E R   C H A T T A N O O G A .

GENERAL REPAIRS - 2.

thoroughly acquainted with such matters as having been "dead" when used.

In order to repair the damage chargeable to the underwriters above referred to, and put the vessel in good condition for active service, it is known that it will be necessary to make the following repairs:

Entire new upper deck,  
New covering board on each side,  
Hatch coamings - Renewed,  
Hatch covers - New set,  
Main deck beams to be refastened and re-inforced; never properly fastened,  
Panting beams to be fitted at each side of ship,  
Rolling rods of iron to be fitted between each hatch,  
Deck stringer plate running fore and aft in upper deck for strengthening,  
Re-planking vessel for almost her entire length on both sides from 15 to 18 strakes,  
Above work all to be calked.

No estimate can be made of the total cost of this work, but we may reasonably look for a cost of from \$25,000 to \$30,000, of which \$4,000 or \$5,000 will undoubtedly be borne by the underwriters of the ship.

JHS THB  
2-20-06

S C H O O N E R C H A T T A N O O G A .

P A I N T I N G .

The important parts of the Schooner painted during  
Season 1905 are as follows:

RED METALLIC PASTE:

Outside of hull, above load line - 2 coats,  
Outside of hull, below load line - 1 coat,  
Hatch covers - 1 coat,  
Hatch ceamings, inside and outside - 1 coat,  
Pilot house roof, - 3 coats,  
Deck house roof - 2 coats,  
Boiler house roof - 2 coats,  
After cabin roof - 2 coats,  
Chain lock deck - 1 coat,  
Coal bunkers - 1 coat,  
Main deck - 1 coat.

TINTED LEAD NO.13:

Pilot house, - 2 coats,  
Deck house - 2 coats,  
Boiler house - 2 coats,  
After cabin - 2 coats,  
Chain locker, sides - 1 coat,  
Fore peak - 1 coat,  
After peak - 1 coat.

WHITE LEAD:

Dining room - 1 coat,  
Kitchen - 1 coat,  
Pantry - 1 coat,  
4 sleeping rooms - 1 coat.

LGN THB  
2-20-06



S C H O O N E R   C H A T T A N O O G A .

	1 9 0 4		1 9 0 5	
	DAYS	PER CENT	DAYS	PER CENT
Time in port,	72½	41.0	72	36.7
Time sailing,	87¾	49.6	108	55.1
Time lost by bad weather, fog and low water,	8¾	4.9	*12¼	6.3
Time lost waiting at See Canal and River,	2	1.1	3½	1.8
Time lost by accidents,	6	3.4	¼	.1
Total time in commission,	177	100.0	196	100.0
Number of trips made,		14		18
Number of cargoes carried,		14		18

PERCENTAGES OF TIME IN COMMISSION IN PORT.

Season 1901.....37.1  
 Season 1902.....39.9  
 Season 1903.....42.9  
 Season 1904.....41.0  
 Season 1905.....36.7

\* This includes 4 days time delayed by heavy ice on Lake Superior, first trip Season 1905.

LGM THB  
2-20-06

S C H O O N E R   C H A T T A N O O G A .

OPERATING ACCOUNT.

<u>RECEIPTS.</u>	GROSS TONS	AMOUNT	PER GROSS TON FREIGHT CARRIED
<u>18</u> cargoes iron ore from Marquette	72110	\$50477.00	\$.7000
 <u>DISBURSEMENTS.</u>			
Extraordinary & General Repairs,	\$ 996.71		
Ship Keeping and Winter Dockage,	98.00		
Fitting Out,	270.70		
Wages and Captain's Salary, (Pioneer \$12619.21	3638.10		
Towing( (Tugs, 3291.02	15910.23		
Captain's Expense Account,	18.20		
Handling Cargoes,	16945.86		
Taxes,	247.86		
Marine Insurance,	2248.47		
Freight List Insurance,	37.85		
Mates Supplies,	1057.22		
Provisions,	671.59		
Stewards Supplies,	60.36		
Fuel,	195.70		
Lubricating Oil,	15.76		
Engineers Supplies,	.85		
Machinery Repairs,	6.30		
General Expenses (Telegrams, Dues L. C. A., &c)	96.34		
Laying Up,	315.51	42841.61	.5941
Net gain for Season 1905,		\$ 7635.39	\$ .1059

NOTE: The cost per ton to operate after eliminating Extraordinary and General Repairs Account is \$.5803 in 1905 and \$.5568 in 1904.

S C H O O N E R   C H A T T A N O O G A .

COMPARISONS.	1 9 0 4	1 9 0 5
Days in commission,	177	196
Number of miles traveled,	17735	21579
Number of trips made,	14	18
Number cargoes freight carried,	14	18
Gross tons freight carried,	56006	72110
Average rate freight per gross ton,	\$.6500	\$.7000
Average cost to carry per gross ton freight,	.5983	.5941
Net earnings per ton freight carried,	\$.0517	\$.1059
Cost per ton to operate after eliminating Ex. & Gen. Rprs.	\$.5568	\$.5803
Gross Receipts,	\$36403.90	\$50477.00
Gross Expenditures,	33508.72	42841.61
Net earnings,	\$ 2895.18	\$ 7635.39
Percentage of operations to earnings,	92.0	84.8
Gross earnings per mile traveled,	\$2.0526	\$2.3391
Operating expenses per mile traveled,	1.8894	1.9853
Net earnings per mile traveled,	\$.1632	\$.3538
Gross earnings per day,	\$205.67	\$257.54
Operating expenses per day,	169.31	218.58
Net earnings per day,	\$ 16.36	\$ 38.96
Expenses per day excluding cargo handling costs,	\$118.11	\$132.12
Expenses per day exclud. cargo hdlg. costs and Ex. & Gen. Rprs.	\$104.97	\$127.03
Cost provisions per man per day (excluding extra meals),	\$.324	\$.343
Average wages paid per day while in commission,	\$12.14	\$15.00
Average ore cargo from Lake Superior,	4000	4006
Average days per trip going up light to Marquette,	10 $\frac{3}{4}$	10
Average number of miles per hour - light,	8.75	8.74
Average number of miles per hour - loaded,	8.12	8.15
General average number miles per hour,	8.44	8.43
Average draft water on ore cargoes from Lake Superior,	(18'2" Ford 18' Aft)	(18'3" Ford 18' Aft)
Average mean draft water on ore cargoes from Lake Superior,	18'1"	18'1"
Chattanooga waiting for Pioneer during season,	11 $\frac{1}{2}$ days	9 $\frac{1}{2}$ days
Chattanooga's percentage of time waiting for Pioneer,	6.49	4.93

NOTE: Prior to Season 1905 the agreement between Lake Carriers Association and Lake Seamens Union was that tow barges of a carrying capacity up to 4000 tons would only need 4 seamen in crew. The agreement for 1905 stipulated that tow barges with a gross registered tonnage exceeding 2100 tons should carry 6 seamen in crew. The increased wages paid per day in 1905 therefore is due to the extra seamen added to crew in 1905.

LGM THB  
2-20-06

STEAMER CHATTANOOGA.

COMPARISON OF ITEMS OF DISBURSEMENT.

	1904	1905	+ OR -	REMARKS
Extraordinary & General Repairs	\$2,326.10	\$ 996.71	= \$1,329.39	In 1904 vessel placed in dry dock and given a thorough bottom calking, \$1,615.52
Shipkeeping & Winter Dockage	143.50	98.00	= 45.50	
Fitting Out	257.75	270.70	= 12.95	
Wages & Captains Salary	2,762.58	3,638.10	+ 875.52	(Rate of wages was same both years. Season 1905 was 19 days longer than 1904, and 2 extra seamen were carried from May 27th, increasing total crew to 10 men instead of 8 as former seasons.)
Captains Expense Account	23.65	18.23	= 5.45	
Tug Services	2,197.56	3,391.02	+ 1,093.46	(In 1905 made 4 trips more than in 1904, and on last trip tugs towed Chattanooga from Toledo to Cleveland, at contract price of \$175.00.)
Handling Cargoes	12,602.35	16,945.86	+ 4,343.51	Rate for unloading ore increased 1¢ per ton in 1905 and vessel carried 16,104 more tons than in 1904.
Taxes	211.31	247.86	+ 36.55	Tax rate increased from \$2.25 in 1904 to \$2.69 in 1905.
Marine Insurance	2,203.70	2,248.47	+ 44.77	Valuation was same both years; received rebates for lay-up returns on account short season in both years.
Freight List Insurance	85.49	37.85	= 47.64	
Mates Supplies	575.59	1,067.22	+ 491.63	In 1905 purchased 2 lake tow lines, and only 1 purchased in 1904.
Provisions	461.28	671.59	+ 210.31	Based on increased cost of \$.019 per man per day.
Stewards Supplies	34.63	60.26	+ 25.63	
Fuel	218.25	195.70	= 22.55	
Engineers Lubricants	16.12	15.76	= .36	
Engineers Supplies	2.29	.65	= 1.64	
Boiler and Machinery Repairs	12.95	6.30	= 6.65	
General Expenses	113.65	96.34	= 17.31	
Laying-up	208.93	315.51	+ 106.58	

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S T E A M E R P I O N E E R.

GENERAL OPERATIONS.

The Steamer PIONEER sailed from the port of Cleveland on first trip of Season 1905 on April 20th. The PIONEER towed the Schooner CHATTANOOGA the first 18 trips of the season between Lake Erie ports and Marquette, Mich.

About the first of November it was necessary for the consort to go to shipyard for repairs and the PIONEER then made four round trips running alone. The last cargo, Trip 22, was unloaded at Cleveland December 9th, the Steamer therefore having been in commission 233 days.

On the last trip of the season a coal cargo was taken for delivery at Escanaba, all other upbound trips having been made light. On down trips, therefore, 21 cargoes were loaded at Marquette and 1 cargo at Escanaba. The PIONEER carried 39,408 gross tons of freight during the season, traveling 27,865 miles.

To the average rate per ton of freight carried, viz., \$.6986, should be added \$.3203 per ton for towing the CHATTANOOGA, making the total receipts per gross ton of freight carried \$1.0189, as against \$.9925 in previous year.

The average cost per ton of freight carried was \$.7990 in 1905 and \$.9160 in 1904, or a decrease of \$.1170 per ton. The lower cost per ton in 1905 is largely due to the increased length of season, which enabled Steamer to carry 12,981 gross tons more freight than was carried in preceding year, thereby giving a lower distribution of cost in fixed charges per ton.

The average net earnings per ton of freight carried are \$.2199 in 1905 and \$.0765 in previous year.

## STEAMER PIONEER.

### GENERAL REPAIRS.

After the PIONEER was laid up in the Fall of 1904 it was necessary to go into dry dock in order to repair propeller wheel broken in October, 1904. This was an insurance claim. While in dry dock opportunity was taken to fill the stern bearing with lignum vitae; also a seacock which had become rusted and loose was renewed, and an extra blade for wheel provided. These several items cost about \$300.00.

The boilers on this boat are now 14 years old and have given more or less trouble for several seasons. They have accordingly been given attention from time to time. A patch was placed on the first ring of the starboard furnace of the starboard boiler, and two on the port boiler, one on the first ring of the starboard furnace and one on the second ring of the port furnace.

In June the furnaces gave further trouble and a 52" patch had to be put on the backhead of the port furnace of the starboard boiler, and new stay bolts were required in starboard furnace of starboard boiler.

A 30" crack developed in the starboard furnace of the port boiler and a new patch had to be put on same.

In addition to these specific items there was much calking and plugging of leaks and various patches during the entire season. The repairs which were made from time to time during the season in order to bring the boilers through aggregated about \$800.00.

A great deal of trouble has been experienced the last few seasons keeping firemen on this boat. With a view to improving the situation the boilers were equipped with Diamond Steam Flue Blowers. The cost of installing four blowers, together with the necessary pipings and fittings was \$288.98.

STEAMER PIONEER.

GENERAL REPAIRS - 2.

The old wooden life boat on the port side of the Steamer was worn out and had been condemned by the Government Inspector. Accordingly a new metallic boat was installed, 22 feet long, with all necessary fittings, at a cost of \$142.35.

Before going to sea another season there will have to be considerable repair, much of which is of a minor nature.

The most important expenditure will be on the boilers. As mentioned above same are in a bad condition. It has been decided to take out the furnaces and replace with new, two furnaces for each boiler of the Adamson type. No one would take the work on contract but we have received a limiting price from the American Ship Building Co. of \$3525.00. Mr. Hynd writing on this subject states as follows:

"I would therefore advise that these furnaces be taken out and renewed. This is likely to be rather an extensive job as I do not think it possible to remove these without taking off the breechings and furnace fronts and the power parts of the front head. I also find that the furnaces are so close together that it will not be possible to put in corrugated furnaces unless of smaller dimensions, which would not appear to be advisable, and in any case the standard type of corrugated furnace cannot be used without renewing the front head. I would therefore say that the new furnaces should be of the Adamson Type as before."

The after deck of this boat has been giving trouble for the past five or six years, leaks developing from time to time. This deck has been patched and nursed along but it is now no longer possible to do so, and a new deck will be laid, together with a new covering board, and the guard rail along the deck refastened. This work will cost about \$700.00.

JHS THB  
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STEAMER PIONEER.

PAINTING.

The important parts of the Steamer painted during Season 1905 are as follows:

PRINCESS BROWN PASTE:

Outside of hull above lead line (chipped and scraped)-2 coats,  
Spar deck - 3 coats,  
Forward deck - 4 coats,  
Forward cabin roof - 3 coats,  
Pilot house roof - 4 coats,  
Hatch covers - 1 coat,  
Hatch coamings, outside - 2 coats,  
Boiler house - 2 coats,  
After cabin, roof above, 4 coats,  
Windlass room deck and chain locker(chipped & Scraped)-1 coat.

RED SHIP PAINT:

Sides of ship in cargo hold (chipped and scraped)-1 coat,  
Hatch coamings, inside - 2 coats,  
Engine room deck - 4 coats,  
Deck aft of engine room - 2 coats.

TINTED LEAD:NO.13:

Forward cabin - 3 coats,  
Pilot house - 3 coats,  
After cabin companionways - 2 coats,  
Wood work aft of engine room - 1 coat,  
Chain locker sides - 1 coat,  
Forward hall - 2 coats,  
Lamp room - 1 coat,  
Pilot house, inside - 1 coat,  
Sides of 9 sleeping rooms - 1 coat,  
Mess room, kitchen, pantry, storeroom, bathroom - 1 coat,  
Sides of engine room - 2 coats,  
Crank room - 1 coat,  
Inside of life boats - 2 coats.

WHITE LEAD:

Ceilings of 9 sleeping rooms - 1 coat,  
Compound room - 1 coat,  
Tool room - 1 coat.

BLACK HULL PAINT:

Coal bunkers (chipped and scraped) - 1 coat,  
Boiler room - 1 coat.  
Outside of life boats and davits - 2 coats.

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STEAMER PIONEER.

	1904		1905	
	DAYS	PER CENT	DAYS	PER CENT
Time in port,	58½	34.2	80	34.3
Time sailing,	101	59.2	131	56.2
Time lost by bad weather, fog and low water,	9½	5.5	*13½	5.8
Time lost waiting at Soo Canal and River,	2	1.1	3½	1.7
Time lost by accidents,	---	-----	4½	2.0
Total time in commission,	171	100.0	233	100.0
Number of trips made,		15		22
Number of cargoes carried,		15		23

PERCENTAGES OF TIME IN COMMISSION IN PORT.

Season 1901.....30.3  
 Season 1902.....36.5  
 Season 1903.....32.6  
 Season 1904.....34.2  
 Season 1905.....34.3

\* This includes 4 days time delayed by heavy ice on Lake Superior first trip Season 1905.

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S T E A M E R P I O N E E R.

OPERATING ACCOUNT.

<u>RECEIPTS.</u>	GROSS TONS	AMOUNT	PER GROSS TON FREIGHT CARRIED
21 cargoes iron ore from Marquette,	36583	\$25608.10	\$.7000
1 cargo iron ore from Escanaba,	1586	951.60	.6000
1 cargo coal to Escanaba, (1388 net tons @ 70 cents)	1239	972.02	.7845
<u>23</u>	<u>39408</u>	<u>\$27531.72</u>	<u>\$.6986</u>
Amount received for towing CHATTANOOGA- $\frac{1}{2}$ freight,		12619.21	.3203
		\$40150.93	\$1.0189
<u>DISBURSEMENTS.</u>			
Extraordinary and General Repairs,	\$1975.51		
Ship Keeping and Winter Dockage,	53.50		
Fitting Out,	961.55		
Wages and Captain's Salary,	9131.23		
Captain's Expense Account,	45.18		
Tug Services,	8.90		
Handling Cargoes,	7633.80		
Taxes,	410.33		
Marine Insurance,	2012.53		
Freight List Insurance,	18.33		
Mates Supplies,	230.94		
Provisions,	1495.90		
Steward's Supplies,	156.84		
Passenger Cabin Equipment,	4.25		
Fuel,	5530.35		
Engineer's Lubricants,	129.76		
Engineer's Supplies,	202.27		
Boiler Repairs,	157.84		
Machinery Repairs,	51.30		
Auxiliary Machinery Repairs,	24.39		
General Expenses (Telegrams, Dues L.C.A., &c.)	141.07		
Laying Up,	1108.30	\$31484.67	.7990
Net earnings,		\$ 8666.26	\$.2199
Less amt. charged to Owners Propn. of Loss,		339.46	
Making total net gain for season 1905,		\$ 8326.80	

NOTE: The cost per ton to operate after eliminating Extraordinary and General Repairs Account is \$.7482 in 1905 and \$.8159 in 1904.

S T E A M E R P I O N E E R.

STATEMENT SHOWING ITEMS CHARGED TO OWNERS PROPORTION OF LOSS  
DURING SEASON 1905.

STRIKING OBSTRUCTION IN RIVER AT ASHTABULA, OCTOBER 28, 1904:

Deductible average,	\$341.18
Less cash discount allowed by Great Lakes Towing Co. (10%) on tug bill,	<u>1.72</u>
<u>Net amount charged to Owners Proportion of Loss,</u>	<u>\$339.46</u>

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S T E A M E R P I O N E E R.

C O M P A R I S O N S.

	1 9 0 4	1 9 0 5
Days in commission,	171	233
Number of miles traveled,	21300	27865
Number of trips made,	15	22
Number cargoes freight carried,	15	23
Gross tons freight carried,	26427	39408
Average rate freight per gross ton,	\$.9925	\$1.0189
Average cost to carry per gross ton freight,	.9160	.7990
Net earnings per ton freight carried,	\$.0765	\$.2199
Cost per ton to operate after eliminating Ex. & Gen. Rprs.	\$.8159	\$.7488
Gross Receipts,	\$26228.59	\$40150.93
Gross Expenditures,	24208.33	31484.67
Net earnings,	\$ 2020.26	\$ 8666.26
Percentage of operations to earnings,	92.3	78.4
Gross earnings per mile traveled,	\$1.2314	\$1.4409
Operating expenses per mile traveled,	1.1365	1.1299
Net earnings per mile traveled,	\$.0949	\$.3110
Gross earnings per day,	\$153.38	\$172.32
Operating expenses per day,	141.57	135.13
Net earnings per day,	\$ 11.81	\$ 37.19
Expenses per day excluding cargo handling costs,	\$112.20	\$102.36
Expenses per day exclud. cargo hdlg. costs and Ex. & Gen. Rprs.	\$96.74	\$93.88
Cost provisions per man per day (excluding extra meals),	\$.379	\$.357
Average lbs. coal consumed per hour steamed,	1468	1802
Average lbs. coal consumed per mile steamed,	167	203
Average cost coal consumed per mile steamed,	\$.1688	\$.1952
Average cost oil consumed per hour steamed,	\$.0404	\$.0412
Average cost oil consumed per mile steamed,	\$.00459	\$.00462
Average wages paid per day while in commission,	\$32.08	\$32.85
Average ore cargo from Lake Superior	1762	1735
Average days per trip towing CHATTANOOGA light to Marquette	11	10½
Average number miles per hour Towing CHATTANOOGA - light,	8.75	8.74
Average number miles per hour towing CHATTANOOGA - loaded,	8.12	8.15
General average number miles per hour towing CHATTANOOGA,	8.44	8.43
Average draft water on ore cargoes from Lake Superior,	(15'7" Ford 16'5" Aft	(15'7" Ford 16'1" Aft
Average mean draft water on ore cargoes from Lake Superior,	16'	15'10"
PIONEER waiting for CHATTANOOGA during season,	5½ days	13¾ days
PIONEER'S percentage of time waiting for CHATTANOOGA,	3.2	5.9

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2-20-06

STEAMER PROMER

COMPARISON OF ITEMS OF DISBURSEMENT

	1904	1905	+ OR -	REMARKS
Extraordinary & General Repairs	\$2,045.83	\$1,975.51	- \$ 69.71	In 1904 layed entire new floor ceiling in cargo hold, \$1,135.00
Shipkeeping & Winter Dockage	30.00	53.50	+ 23.50	
Fitting Out	493.03	981.55	+ 488.52	A large purchase of supplies necessary, and more time required for fitting out in 1905
Wages & Captains Salary	7,015.75	9,131.33	+ 2,115.47	Rate of wages remained the same both years. Season 1905 was 62 days longer than 1904
Captains Expense Account	27.00	45.13	+ 17.53	
Tug Services	18.00	8.00	- 9.00	
Handling Cargoes	5,021.13	7,033.50	+ 2,012.37	Carried 11742 tons more ore in 1905 than in 1904, and unloading rate increased 1/8 per ton
Taxes	345.70	410.03	+ 65.14	Rate of taxes \$2.50 in 1905 and \$2.35 in 1904
Marine Insurance	2,045.83	2,013.53	- 32.30	Valuation of Steamer was same for both years. In 1905 received rebate \$123.37, lay up return, 15 day per
Freight List Insurance	26.05	18.33	- 7.72	
Mates Supplies	141.55	230.04	+ 88.49	
Provisions	1,124.00	1,405.00	+ 281.00	Based on decreased cost of \$1.023 per man per day
Stewards Supplies	100.57	159.34	+ 58.37	
Passenger Cabin Equipment		4.25	+ 4.25	
Fuel	2,597.20	5,530.35	+ 2,933.15	Based on increased consumption of 36 lbs. per mile run
Engineers Lubricants	97.73	120.75	+ 23.02	Based on increased cost of \$1.00003 per mile run
Engineers Supplies	70.08	309.27	+ 239.19	The increased length of season in 1905 necessitated a larger purchase of supplies
Boiler Repairs	46.47	157.34	+ 110.87	
Machinery Repairs	8.15	51.30	+ 43.15	
Auxiliary Machinery Repairs	12.50	34.30	+ 21.80	
General Expenses	230.03	141.07	- 88.96	In 1904 Chief Engineer Naylor received second prize of \$75.00 for lowest fuel consumption in 1903
Laying Up	1,130.21	1,105.30	- 24.91	

LGM-AGS.  
2/19/06

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S T E A M E R   A N D A S T E .

GENERAL OPERATIONS.

The Steamer ANDASTE sailed from the port of Ashtabula on first trip of Season 1905 on April 10th, and finished discharging last cargo at Cleveland, December 16th, having therefore been in commission 250 days. On account of the heavy ice encountered on Lake Superior and See River, first trip, the ANDASTE was delayed 10½ days.

This Steamer traveled a total distance of 28,610 miles, carrying 83,056 gross tons of freight. Altogether 23 round trips were made for the season, Steamer traveling up light every time with the exception of six trips, when coal cargoes were taken for delivery at upper lake ports.

The average rate of freight received on all cargoes carried during the season was \$4.6566 per gross ton as against \$4.6603 in preceding year.

The average cost per gross ton of freight carried was \$4.4816 in 1905 and \$4.5327 in 1904, or a decreased cost of \$4.0511 per ton in 1905.

The ANDASTE was in commission 79 days longer in season 1905 as compared with 1904, which enabled Steamer to carry 26,496 tons more freight. This increase in freight, therefore, makes a more favorable distribution of operating cost per ton in 1905.

The average net earnings per gross ton of freight carried are \$4.1750 in 1905 and \$4.1276 in previous year.

STEAMER ANDASTE.

GENERAL REPAIRS.

The General Repairs on this Steamer were about \$1200.00 larger in 1905 than the previous year. Among the principal items the following may be mentioned.

The original floor ceiling in the ANDASTE consisted of 1" hemlock sheathing with 3" oak planking under the hatchways and 2" oak planking outside the hatchways. The ceiling under the hatches was found to be in a badly worn and splintered condition. In renewing this ceiling the "Z" frames on tank top were found to be badly bent. These were straightened up and an extra support to give strength to the frames of 2 x 6 pine timbers were placed on same. This 2 x 6 pine was covered with 1" hemlock sheathing, and then laid with 3" oak on the outside of hatchways where the ore buckets had broken through the planking. This repair cost \$496.00.

The following four items of repair aggregate a cost of \$76.77:

- Bulwarks forward of fueling hatch removed and replaced with new rail;
- Coal bunker hatch in 6 sections was renewed;
- Cornice around pilot house broken by repeated contact with fueling buckets repaired;
- Promenade deck in various places had become decayed, and was renewed where necessary.

The old deck in crank room had done service since the Steamer came out. This deck was badly decayed and renewal became absolutely necessary. This work cost \$113.40.

The Local Inspector at Buffalo directed important changes in the boat davits. The old ones were taken down, sent to the blacksmith's shop, heated and bent and braces put on. New iron plates were provided for each davit extending out 3 feet from cabin roof and attached thereto, this being done in order to swing the boats clear of the sides of ship which could not be done before. Knees had to be riveted to boiler house where the boat sockets rested. This work cost \$253.00.

S T E A M E R   A N D   A S T E .

GENERAL REPAIRS - 2.

The boilers on this boat have had to be nursed along for the past four or five years. Repairs were made during the winter in which attention was given to the inner expansion rings starboard furnace at the place where the bridge wall casting rests. The old butterfly patch at this point had to be cut out and replaced with new, carried to a point 6 inches higher on each side than before, which work cost \$126.03.

The lower part of back sheet of combustion chamber port boiler was badly corroded and cracked at the staybolt holes. Same was cut out to a depth of 28 inches from the bottom all the way across the combustion chamber, and a new plate fitted in, it being necessary to renew all staybolts in the way of this plate. This work cost \$349.08.

During the early part of November when the ANDASTE was at Buffalo, the Inspector of that district came aboard and made further examination of the boilers. It was found that all the lower part of combustion chamber in port boiler was badly deteriorated, and the backheads in bad shape. The starboard boiler also showed similar conditions. Numerous patches needed to be gone over, and the Inspector refused to allow the boat to go out until such repairs were made, and then her steam was cut down to 135 lbs. This work cost \$300.00.

A new set of Wilford tarpaulins were put on the boat at a cost of \$197.15

In addition to the general run of work necessary to be done before the Steamer will be fit for operation the coming season, will be the renewal of the hatch covers. These covers evidently have not been renewed since the boat came out and are now in such shape that they will have to be renewed. They will cost about \$50.00 per cover or probably \$350.00 for the seven hatches.



STEAMER ANDASTE.

GENERAL REPAIRS - 3.

That portion of the bilge ceiling which was repaired the preceding season will have to have attention again in a number of places; also considerable repair to the bilge ceiling, and new covers for manholes. This will cost from \$250.00 to \$300.00.

In the inspection of the boilers above referred to the Inspector advised that in his opinion these boilers should no longer be used. Mr. Hynd after making examination of the boilers reports as follows:

"Examination of boilers shows furnaces in very bad condition. All the expansion rings are badly cracked and have already been patched, the patches on many of them extending above the gratebars and the cracks now extending further than these patches.

In the combustion chambers the throat sheets, back sheets and wrapper sheets are badly corroded and pitted and the backhead badly pitted at turn of the flange on the inside, and considerable deterioration by corrosion on the outside of the head flange; also lower part of frontheads checked on inside at turn of flange.

To put these boilers in good condition would require the renewal of furnaces, lower part of combustion chambers, lower part of front and backheads, and the tubes. The local inspector at Buffalo having also taken exception to the shells of the boilers being somewhat pitted, it would be necessary to renew the defective parts of the shells or fit re-informing pieces over them.

To make such extensive repairs to the boilers in the proper manner, would require that they be removed from the vessel and taken to boiler shop in any case, and after full consideration it was decided that it would be better to renew the boilers entirely.

In considering whether it would be advisable to make any change in the boilers when they were being renewed the following points were considered: That with two boilers of same dimensions as before, the same saddles, breeching and stack, all boiler fittings and pipings replaced as before, while if the dimensions of the boilers were changed all of such parts would require to be renewed, and to use one boiler with forced draft would also require that the bunker bulkheads should be moved forward to give proper width of firehold, and a new firehold floor built, and also some changes on the deck above.

The additional cost of renewing the boilers on this plan over replacing them of the original dimensions was estimated at at least \$3000.00, and as the original plant had been a fairly economical one it was finally decided to replace the boilers as before."

Accordingly new boilers will be installed by the American Ship Building Co. at \$12,600.00.

S T E A M E R   A N D   A S T E .

P A I N T I N G .

The important parts of the Steamer painted during Season 1905 are as follows:

PRINCESS BROWN PASTE:

Outside of Hull, above load line - 3 coats,  
Outside of hull, below load line - 2 coats,  
Pilot house roof - 3 coats,  
Hatch covers - 1 coat,  
Hatch coamings, outside - 1 coat,  
Boiler house - 2 coats,  
After cabin, roof above - 2 coats,  
Deck aft of engine room - 2 coats,  
Windlass room - 1 coat,  
Windlass room deck - 2 coats,  
Spar deck - 2 coats,  
Engine room deck - 3 coats.

RED SHIP PAINT:

Hatch coamings, inside - 1 coat,  
Iron work aft of engine room - 1 coat,  
Chain locker, including deck - 1 coat,  
Fore peak - 1 coat,  
Sides of ship in lower cargo hold - 1 coat,  
All structural work in cargo hold - 1 coat.

TINTED LEAD NO. 12:

Forward turret - 1 coat,  
Boiler house and cabins - 2 coats,  
Spar - 3 coats,  
Sides of 6 sleeping rooms, kitchen, mess room and pantry - 1 coat,  
Inside bulwarks around cabin - 2 coats,  
After cabin, roof below - 2 coats,  
Wood work aft of engine room - 1 coat,  
Lump room - 1 coat,  
Dunnage room - 1 coat.

WHITE LEAD:

Engine room sides - 1 coat,  
Compound room - 1 coat,  
Ceilings of 3 sleeping rooms and dining room - 1 coat.

RED LEAD:

Boiler room - 1 coat,  
Fire hold - 1 coat,  
Crank room - 1 coat.

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2-16-06

STEAMER ANDASTE.

	1904		1905	
	DAYS	PER CENT	DAYS	PER CENT
Time in port,	57½	33.6	106	42.4
Time sailing,	99	57.9	110½	44.1
Time lost by bad weather, fog and low water,	12¾	7.5	*16½	6.6
Time lost waiting at See Canal and River,	1½	.9	2½	1.0
Time lost by accidents,	½	.1	14¾	5.9
Total time in commission,	171	100.0	250	100.0
Number of trips made,	18		23	
Number of cargoes carried,	19		29	

PERCENTAGES OF TIME IN COMMISSION IN PORT.

Season 1901.....44.9  
 Season 1902.....36.7  
 Season 1903.....42.4  
 Season 1904.....33.6  
 Season 1905.....42.4

\* This includes 10½ days time delayed by heavy ice on Lake Superior first trip of Season 1905.

LGM THB  
2-16-06

STEAMER ANDASTE.

OPERATING ACCOUNT.

<u>RECEIPTS</u>	GROSS TONS	AMOUNT	PER GROSS TON FREIGHT CARRIED
22 cargoes iron ore from Marquette,	66964	\$46874.80	\$.7000
1 cargo iron ore from Escanaba,	2717	1630.20	.6000
5 cargoes coal to Marquette: (12718 net tons @ 35 cents)	11355	4451.13	.3920
1 cargo coal to Escanaba (2263 net tons @ 70 cents)	2020	1584.07	.7842
<u>29</u>	<u>83056</u>	<u>\$54540.20</u>	<u>\$.6566</u>
<u>DISBURSEMENTS.</u>			
Extraordinary and General Repairs,	\$ 2874.94		
Ship Keeping and Winter Dockage,	65.91		
Fitting Out,	357.59		
Wages and Captain's Salary,	9357.11		
Captain's Expense Account,	50.08		
Tug Services,	371.12		
Handling Cargoes,	14126.70		
Taxes,	463.12		
Marine Insurance,	3418.92		
Freight List Insurance,	51.84		
Mates Supplies,	437.53		
Provisions,	1577.24		
Steward's Supplies,	100.01		
Fuel,	5223.97		
Engineer's Lubricants,	84.95		
Engineer's Supplies,	124.74		
Boiler Repairs,	251.69		
Machinery Repairs,	45.27		
Auxiliary Machinery Repairs,	20.78		
General Expenses (Telegrams, Dues L. C. A., &c.)	260.36		
Laying Up,	741.75	40005.62	.4816
Net earnings,		\$14534.58	\$.1750
Less amt. charged to Owners Propn. of Loss,		91.83	
Making total net gain for Season 1905,		\$14442.75	

NOTE: The cost per ton to operate after eliminating Extraordinary and General Repairs Account is \$.4470 in 1905 and \$.5030 in 1904.

LGM THB  
2-16-06



STEAMER ANDASTE.

COMPARISONS.

	1904	1905
Days in commission,	171	250
Number of miles traveled,	26107	28610
Number of trips made,	18	23
Number cargoes freight carried,	19	29
Gross tons freight carried,	56560	83056
Average rate freight per gross ton,	\$.6603	\$.6566
Average cost to carry per gross ton freight,	.5327	.4816
Net earnings per ton freight carried,	\$.1276	\$.1750
Cost per ton to operate after eliminating Ex. and Gen. Rprs.	\$.5030	\$.4470
Gross Receipts,	\$37349.27	\$54540.20
Gross Expenditures,	30127.35	40005.62
Net Earnings,	\$ 7221.92	\$14534.58
Percentage of operations to earnings,	80.6	73.3
Gross earnings per mile traveled,	\$1.4306	\$1.9063
Operating expense per mile traveled,	1.1540	1.3983
Net earnings per mile traveled,	\$.2766	\$.5080
Gross earnings per day,	\$218.41	\$218.16
Operating expenses per day,	176.18	160.02
Net earnings per day,	\$ 42.23	\$ 58.14
Expenses per day excluding cargo handling costs,	\$115.99	\$103.51
Expenses per day exclud. cargo hdlg. costs and Ex. & Gen. Rprs.	\$106.19	\$ 92.01
Cost provisions per man per day (excluding extra meals)	\$.384	\$.347
Average lbs. coal consumed per hour steamed,	1548	1648
Average lbs. coal consumed per mile steamed,	141	152
Average cost coal consumed per mile steamed,	\$.1689	\$.1825
Average cost oil consumed per hour steamed,	\$.0445	\$.0321
Average cost oil consumed per mile steamed,	\$.00405	\$.00295
Average wages paid per day while in commission,	\$33.15	\$32.61
Average ore cargo from Lake Superior,	3010	3030
Average days per trip going up light to Marquette,	8½	8½
Average days per trip going up light to head Lake Superior,	9½	-----
Average number miles per hour - light,	11.88	11.92
Average number miles per hour - loaded,	10.29	10.24
General average number miles per hour,	10.99	10.81
Average draft water on ore cargoes from Lake Superior,	(17'8" Ford	(17'10" Ford
Average mean draft water on ore cargoes from Lake Superior,	(18'4" Aft	(18'5" Aft
	18'	18'2"

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STEAMER ANDASTE

COMPARISON OF ITEMS OF DISBURSEMENT.

	1904	1905	+ OR -	REMARKS
EXTRAORDINARY & General Repairs	\$1,074.80	\$2,874.04	+ \$1,800.08	In 1905 patched and repaired Boilers at cost of \$775.11. Also extensive repairs to decks in cargo hold, crank room, etc., costing upwards of \$800.00
Ship Hoopings & Winter Deckage	110.83	66.91	- 44.92	Steamer spent a longer time at dock during Spring 1904, on account Shipmasters' strike
Fitting Out	700.00	387.59	- 312.41	The fitting out bill for Ship Chandlery supplies, amounting to about \$300.00, was charged in trip #3 accounts, instead of fitting out, which therefore decreased fitting out cost and increased Mate's supplies
Wages & Captains Salary	7,127.06	9,357.11	+ 2,230.15	Season 1905 was 79 days longer than 1904. Rate of wages was same for both years
Captains Expense Account	49.06	50.08	+ .42	
Tug Services	67.53	371.13	+ 303.60	10 cargoes more freight were carried in 1905 than 1904
Handling Cargoes	10,309.33	14,136.70	+ 3,827.37	Rate for unloading increased 1/4 per ton in 1905 and Steamer carried 15003 tons more ore than in 1904
Taxes	403.49	403.13	+ 56.70	Tax rate increased from \$2.36 in 1904 to \$2.69 in 1905
Marine Insurance	2,380.94	3,418.99	+ 1,038.05	In 1905 the cost of extending Insurance after Dec. 31st was \$643.31. The 10% premium in 1904 is due to rebate received a/c lay-up returns for short season, that year. Valuation of Steamer was same both years
Freight List Insurance	61.00	61.04	- 0.26	
Mate's Supplies	317.41	437.58	+ 320.17	See above remarks under "fitting out".
Provisions	1,101.13	1,577.94	- 167.16	Based on decreased cost of \$.037 per man per day
Stewards Supplies	189.73	190.01	- 30.77	
Fuel	4,549.13	5,233.97	+ 376.80	Based on increased consumption of 11 lbs. per mile (Steamer carried 8 cargoes more coal than in season 1904)
Engineers Lubricants	105.70	84.65	- 31.47	Based on decreased cost of \$.00110 per mile run
Engineers Supplies	80.26	124.74	+ 35.48	
Boiler Repairs	53.10	251.60	+ 198.50	In 1905 necessary to patch starboard boiler and repair port boiler at contract price of \$140.00
Machinery Repairs	6.74	45.37	+ 38.63	
Auxiliary Machinery Repairs	6.71	39.78	+ 14.07	
General Expenses	385.61	300.36	- 85.25	
Laying up	575.28	741.75	+ 166.47	More time required for laying up work in 1905, labor cost exceeding 1904 by \$166.47

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STEAMER CHOCTAW.

GENERAL OPERATIONS.

The Steamer CHOCTAW sailed from the port of Ashtabula on first trip of season 1905 on April 10th, and arrived at Cleveland, ready to go into winter quarters, on December 12th, having therefore been in commission 246 days.

This Steamer was engaged in the transportation of iron ore from Lake Superior to Lake Erie ports, and of the cargoes carried, 24 were loaded at Marquette and 1 at Ashland. The upbound trips were made traveling light, with the exception of seven times, when coal cargoes were taken for delivery at Marquette and Ashland. The CHOCTAW therefore made 25 round trips for the season, carrying 32 loads, or 90980 gross tons of freight.

The average rate of freight received on all cargoes carried during the season was \$.6596 per gross ton as compared with \$.6558 in previous year.

The average expenses per gross ton of freight carried was \$.4497 in 1905 and \$.5110 in 1904, or a decreased cost of \$.0613 per ton. The less cost in 1905 is due to the increased length of season which enabled steamer to carry 32,947 gross tons more freight than in season 1904. This increased freight therefore gives a more favorable distribution of fixed charges in cost per ton.

The average net earnings per ton of freight carried are \$.2099 in 1905 and \$.1448 in 1904.

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STEAMER CHOCTAW.

GENERAL REPAIRS.

During winter 1904-5 it was necessary to chip, scrape and paint wherever rust had developed in cargo hold. This work cost in the neighborhood of \$250.00.

To renew the floor and bilge ceiling where it was worn and broken in various places in cargo hold, it was necessary to put in 2 inch and 3 inch oak on top of hemlock timber. This renewal cost \$332.40.

The lower part of back sheet of combustion chamber port boiler was badly corroded and cracked at the staybolt holes. This part of boiler was cut out to a depth of 28 inches from the bottom, the full width of the combustion chamber, and then fitted with a new plate and all screw staybolts in way of new plate were renewed 1/8 inch larger than the old staybolts. It was necessary in doing this work to cut a new handhole in backhead of boiler to which a new cover was fitted in the usual way. The contract for doing this work was \$326.55.

New patent flue blowers made by the Power Specialty Co., Detroit, have been installed on the CHOCTAW. - There are four of these, two in each boiler. The price of the flue blowers was \$50.00 each. The cost of cutting holes in boilers for installation, with the necessary fittings, therefore, makes the total cost of flue blowers installed \$392.23.

Outside of the usual run of repairs there are two principal items that will have to be given attention before the opening of navigation another season.

The wood hatch covers on this boat have apparently not been renewed since the Steamer came out. While there have been much repairs on them from time to time they are now in a condition where they must be renewed. The cost of the

STEAMER CHOCTAW.

GENERAL REPAIRS - 2.

new hatch covers will be about \$50.00 each, or a total cost for the 7 hatches of about \$350.00.

The boilers of this Steamer have given trouble for several years. They have been nursed along from year to year with such repairs as would bring them through the season, but it has now become necessary that some important repairs be made. On the starboard boiler lower part of throat sheet under combustion chamber to be renewed; lower part wrapper sheet to be renewed; lower part of backhead of combustion chamber to be renewed, and some patches on starboard furnace. Port boiler, lower part of fronthead to be renewed, 2 new Adamsen Furnaces to be installed, lower part throat sheet combustion chamber to be replaced with new; lower part of wrapper sheet to be replaced with new. The above work will necessitate the taking out of the frontheads, which will have to be replaced and re-riveted. This work will cost in the neighborhood of \$3000.00.

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STEAMER CHOCTAW.

PAINTING.

The important parts of the Steamer painted during Season 1905 are as follows:

PRINCESS BROWN PASTE:

Outside of hull, above load line - 3 coats,  
Outside of hull, below load line - 2 coats,  
Spar deck - 1 coat,  
After cabin decks - 2 coats,  
Hatch covers - 1 coat,  
Hatch coamings, outside - 1 coat,  
Pilot house roof - 3 coats,  
After cabin, roof above - 2 coats,  
Deck aft of engine room - 2 coats,  
Dunnage room - 1 coat.

RED SHIP PAINT:

Lower hold, sides of ship - 1 coat,  
Lower hold, structural work - 1 coat,  
Hatch coamings, inside - 2 coats.

TINTED LEAD NO.13:

Forward turret - 2 coats,  
Pilot house - 2 coats,  
Spar - 2 coats,  
Boiler house - 2 coats,  
After cabin - 2 coats,  
After cabin, roof below, 1 coat,  
Wood work aft of engine room - 1 coat,  
After hall - 1 coat,  
Deckhands room - 1 coat,  
Crank room - 1 coat,  
Inside bulwarks, around cabin aft - 2 coats.

WHITE LEAD:

Dining room ceiling - 1 coat,  
Engine room sides - 1 coat,  
Compound room - 1 coat,  
Tool room - 1 coat.

RED LEAD:

Boiler room - 1 coat,  
Fire hold - 1 coat,  
Breeching, up-take, and boiler fronts - 2 coats.

BLACK PASTE:

Coal bunkers - 1 coat,  
After cabin tanks - 2 coats,  
Life boats, outside - 2 coats.

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2-15-06