

Copy 35912
Navy

E 19

(1)

Fred. Martin Portsmouth Dock 2nd Oct. 1833

Sir

I have to state for the information of the Lords Commissioners of the Admiralty, that I have visited the Rope Manufactory at Cherbourg, accompanied by the Master Rope-maker.

It appears to me, that the principal difference between the French mode of manufacturing rope and ours, consists in the attention paid by them to spinning the Yarns, and the great pressure used when drawing out the strands, previous to laying the rope. A French Rope-maker spins two Yarns of 200 fathoms french, each in an hour, which is equal to about 364 fathoms english, whilst our English Spinner produces in the same time, four yarns of 170 fathoms each, or 680 fathoms in the hour. A French Spinner's days work is 15 threads; at this yard a Spinner produces 32 in the day, it is therefore natural to suppose that a better yarn is made; so particular are the French Inspectors in preventing the Men from exceeding the quantity before specified, that the young Spinners have a rope fastened to one leg, which obliges them to go over a certain distance within a

Hon^{ble} Geo. Elliot CB.

a given time, when the Yarn is spun, it passes through two Lizards, which renders it smooth, and rubs off any of the coarse parts of the Hemp that may remain; the Yarns are tarred singly, passing through tar at the heat of about 150 degrees, and the Tar does not appear to penetrate into the heart of the Yarn though it must do so in course of time, as the Yarns I have examined in French Rope appear to be tarred to the heart. - In forming the strands at Cherbourg, more pressure is used than with us, and in large rope they draw out only one strand at a time, the plates through which the Yarns pass contain a sufficient number of holes in circles, to allow each yarn to pass separately (while here 4 Yarns pass through the same hole) by which they lay smoother and more regular than ours do.

It must be observed that the French with very few exceptions, use 4 strand rope for their running, as well as standing rigging which though not generally considered so strong as that made of 3 strands, causes the friction in passing through the Blocks to act upon a greater portion of the circumference of the rope, and therefore may be one cause of their Rope being more durable. The French were formerly in the habit of cleaning their
Hemp.

Hemp to the amount of 28 percent or even more leaving 72 lbs in the hundred fit to spin; they now only clean 8 lbs in the hundred leaving 92 lbs for spinning, and the Officers stated to me that neither the strength or durability of the rope has been injured by the change: both Tar and Hemp is now entirely of French growth.

From the above statement it will appear that all which is necessary to enable us to follow the French system of Ropemaking is to provide new Minor Plates with a sufficient number of holes to allow of each Yarn passing separately to the bush; to put more power in drawing out the strands, and which appears to me of most importance, cause the Yarns to be spun with more attention, - Unfortunately I did not obtain a sample of the French Yarn previous to its being made into Rope, but I have brought with me 3 pieces of Rope as samples, numbered and marked as in the accompanying list - Since my return I have caused the Master Ropemaker to spin 4 Yarns - 2 of Italian Hemp and 2 of Russia, giving the Spinner as much time as he required. I send them by this evening's Coach as samples, they were spun at the rate of 3 to the hour, I also send specimens of Yarns of different sizes, spun at this Yard within the last Year

Year, at the rate of 4 to the hour,
that their Lordships may have an
opportunity of comparing them with
each other.

I am,

Sr,

Your most humble servant

(Signed) Fred. L. Maitland

(Rear Admiral, Superintendent
Portsmouth Dockyard)