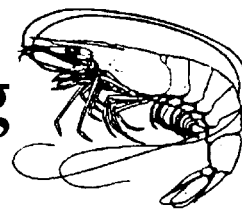
Easy Rig



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Easy Rig

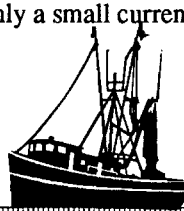
A different way of double rigging, which has the potential of increased efficiency, is being used by shrimpers out of Cameron, La. This particular rig, called the "easy rig" in Cameron, is applied to double-rigged vessels.

The usual double rig (two nets) uses four doors, one on the outside and one on the inside of each net. The easy rig differs in that only two doors, the outer door for each net, are used. The inner door is replaced by a dummy door, or sled. The inner doors are coupled together with a rope so that the net is spread with only two doors rather than one.

The easy rig gets the net away from the wheel wash (disturbed water behind boat). This not only reduces drag caused by the wheel wash hitting the inner doors but also may yield higher catches because the shrimp are disturbed by the wheel wash and, in attempting to avoid it, may also avoid capture by the net. In addition, with this rigging, the try net, as illustrated in Figure 1, does not rob the regular net.

Using this rig, shrimpers report that they can cover the same distance in less time and at a lower engine speed than they do when pulling a standard rig. Some use bigger doors than standard at a lower angle of attack.

A result-demonstration of the rig was conducted off Cameron. The results were impressive. A fuel monitor was mounted on the boat, and comparative runs between the easy rig and a standard rig were made. In this comparison, the same 7-40 doors and 25-foot nets were used for both rigs. The 25-foot nets were 1 1/4 inch mesh, #15 twine. Only a small current was present.



Easy Rig

1st Drag: (Against Current)

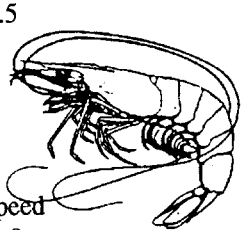
Rpm	Gph	Knots
1600	4.5	3.0
1626	5.6	3.4
1633	5.8	3.5
1633	5.9	3.4
1642	6.0	3.4
1630	5.9	3.4

2nd Drag: (With Current)

Rpm	Gph	Knots
1670	6.6	3.6
1637	5.6	3.4
1637	5.8	3.4
1644	5.8	3.6
1647	5.8	3.6

3rd Drag: (Against Current)

Rpm	Gph	Knots
1529	3.5	3.2
1523	3.6	3.1
1535	3.7	3.4
1535	3.7	3.6
1541	3.8	3.5



Standard Rig

(With Current)

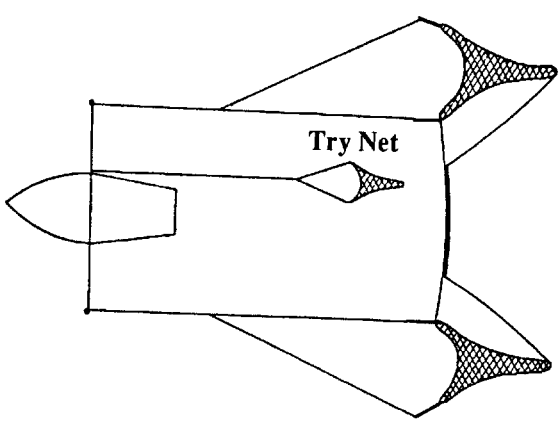
Rpm	Gph	Speed
1621	6.2	2.9
1660	6.6	2.9
1630	5.7	2.9
1804	10.4	3.2 (Full-Throttle)
1613	5.5	2.8
1596	5.5	2.9
1610	5.8	2.9
1602	5.9	2.6
1615	6.1	2.7

As shown, the easy rig exhibited a marked improvement over the standard double-rigged trawl. At throttle settings between 1600 and 1650 rpm, the standard rig consumed an average 5.8 gallons per hour of diesel fuel at a trawling speed of 2.8 knots, and the easy rig consumed 5.75 gallons per hour at a trawling speed of 3.5 knots. The actual fuel consumption was slightly less, and the trawling speed was higher for the easy rig, producing a 21% increase in efficiency. More striking were the results obtained by cutting back to 1500 rpm. Under these conditions, an average fuel consumption of 3.66 gallons per hour at a speed of 3.28 knots was obtained. This was a 43% decrease in fuel consumption despite the higher trawling speed.

There will be differences in rigging from boat to boat and for different trawling conditions, but two main points should be kept in mind:

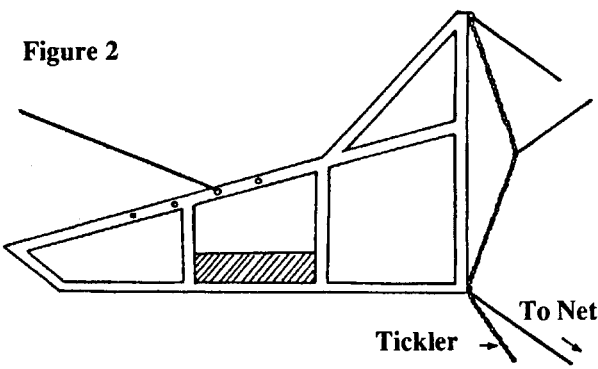
1. The dummy door should be straight behind the towing block as shown in Figure 1.
2. The length of the rope is critical. The correct length should produce an even shine on the dummy door.

Figure 1



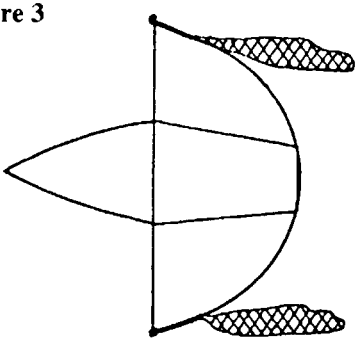
Although you will need to set up the rig for your particular boat, it might be helpful to consider some details of the result-demonstration. A 40-foot boat with 20-foot beam with outriggers 48 feet from block to block was used. Normally 9-40 doors are used on the easy rig with 52-foot nets as compared to 7-40 doors with a standard double rig when trawling in the Gulf. With 25-foot nets, 7-40 doors or 6-foot doors are used with the easy rig instead of 5-foot doors with the standard rig. The bigger doors are set for smaller angles of attack. The dummy door (Figure 2) is about 7 feet long and 40 inches high, plus two additional feet of jack up. The towing holes are on 2-inch spacing and start about one-third of the way from the nose of the dummy door. Weight can be added at the center when needed in deeper water.

Figure 2



The legs of the bridle are the same length, but their hookup to the outer door and the dummy door differ and, in effect, add length to the outer bridle leg so that the net tows as shown in Figure 1. The rope is about 40 feet long which, with this boat, allows the trawls to be pulled in as shown in Figure 3. Hauling in is completed by unhooking the rope and hauling in the bags. If the rope is not long enough to haul the doors all the way in, they should be hauled part way in, the rope unhooked and the haul-in completed as on a standard rig.

Figure 3



Shrimpers who have used this rig estimate a 15% improvement in fuel economy. In addition, the use of long outriggers is avoided. The shrimpers also report that the rig handles and performs well and catches at least as many shrimp — and probably more — than the standard rig.

The easy rig is an efficient rig for double-rigged vessels. It may take some experimenting for it to work properly for each vessel, but the cost to rig up is minimal.

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