



# Review of Potting Haulers & Rollers



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# Review of Potting Haulers & Rollers

## Presentation: Initial findings

- Project need
- Approach
- Findings
- Solutions
- Recommendations
- Next steps





# Review of Potting Haulers & Rollers

## Project need


- Accident report into loss of “Discovery” identified tendency of backrope to ‘ride out’ of ‘slave’ (or v-wheel) haulers when used with roller
- MAIB recommendation to investigate this area
- Seafish agreed to take on action to update their industry guidance

**ACCIDENT REPORT**

Report on the investigations into the loss of the skipper from fv **Discovery** during single-handed fishing operations 3 miles east of Fraserburgh 9 October 2010

and

the loss of the skipper from fv **Breadwinner** while fishing single-handedly 5.5 miles east of Score Head, Bressay 20 January 2011



**MAIB**  
MARINE ACCIDENT INVESTIGATION BRANCH

VERY SERIOUS MARINE CASUALTY      REPORT NO 22/2011      NOVEMBER 2011



# Review of Potting Haulers & Rollers

## Approach:

- Qualitative study
- Face-to-face and telephone interviews
- Talking to those that design, make and use the potting roller system
- Wide geographical area (pan-UK)
- Industry engagement (NFFO, SFF, WFA)
- Focus on solutions & innovations both in design and operation
- Emphasis on visual evidence



## Review of Potting Haulers & Rollers

Approach: Face to face interveiws with skippers

**Scotland** – Arbroath, Gourdon, Montrose, Peterhead, Fraserburgh, Buckie, Stonehaven, Whitehills

**Wales** - Cardigan, Aberystwyth, New Quay, Aberporth, Ynys Las,

**England** – Newquay, Padstow, Newlyn, St Ives, Whitby, Bridlington, Scarborough, Hornsea

**Jersey** – end March

By Phone

Northern Ireland, West Coast of Scotland, South East



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## Approach:

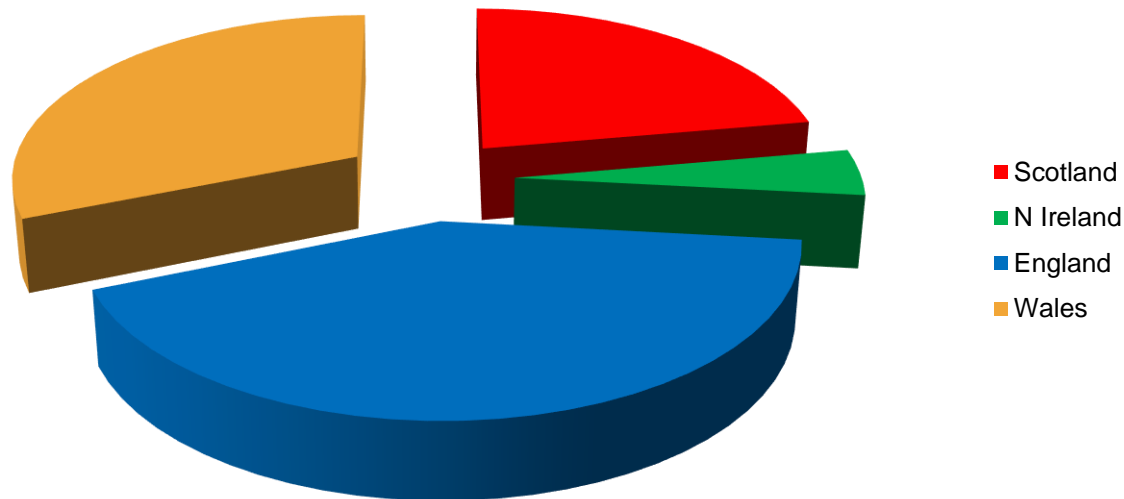
	Face-to-face	Telephone
<b>Fishermen</b>	32	2
<b>Boat builders / marine engineers</b>	6	3
<b>Gear manufacturers</b>	3	1
<b>Hauler manufacturers</b>	1	3



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## Approach:

### Potting study: Interviews by Country





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Findings: Setting the scene - Standard roller set-up:







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Findings: Setting the scene - Standard roller set-up:





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## Findings: Fishermen

- General awareness of issue amongst fishermen good but none identified it as a significant risk
- Recognition by all that backrope needed to be leading f'ard when hauling and that position of vessel on gear was critical to operation of most roller systems
- Greater concern over pots 'flying' over roller
- Many reported "they could not go back" to davit winch
- Many had experienced 'teething problems' and had made changes to gear rigging and boat



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## Findings: Fishermen

- Recognition that roller system was not perfect – limitations included: pots twisted around backrope and hard to get to pots if come up in a bundle or shot over
- Many would like to move winch / roller further f'ard to help achieve right lead angle but wheelhouse gets in the way
- System less favoured in shallow water or less tide where the boat can over-run the gear as hauling (i.e. backrope runs aft)



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## Findings: Fishermen

- **Distance between roller and hauler** – most believed as far as possible (to reduce range in angle of entry into v-wheel); this was restricted by beam / access to wheelhouse in most vessels
- **Roller diameter** – consensus larger diameter better
- **Hauler height** – no consensus, although SW, Brid have increased height to reduce tension at rail
- **Rope thickness** – no difference – knots and splices cause ‘jump outs’ when rope at angle to slave winch
- **Tension** – not a problem, unless hard fast at angle



# Review of Potting Haulers & Rollers

## Findings: Boat builders, winch & gear manufacturers

- Boat builders not totally engaged and were reserved
- Some boat builders possibly do not fully understand the operation of the hauler/roller system
- Boat builders / marine engineers reported that fishermen 'design their own' with no set design being used
- Winch suppliers understand limitation of slave haulers but almost always supply the winch only and do not get involved in design or fabrication of roller system



# Review of Potting Haulers & Rollers

## Solutions:

- 1) Angled slave (v-wheel) hauler
- 2) Vertical guides
- 3) Horizontal hauler
- 4) 'Under and over' hauler
- 5) Swivel post hauler
- 6) Siting of hauler / roller
- 7) Understanding and use of 'mizzen sail'
- 8) Rigging of gear



# Review of Potting Haulers & Rollers

## Angled slave and leading rollers





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## Angled slave and leading rollers







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## Angled slave and leading rollers

### **Advantages:**

- Skippers advised greatly reduced rope 'ride out'
- Reduces angle of entry into slave

### **Disadvantages:**

- Possibility for rope to ride out remains
- Rollers wear out quickly and are seen as an added cost



# Review of Potting Haulers & Rollers

## Vertical guide rollers





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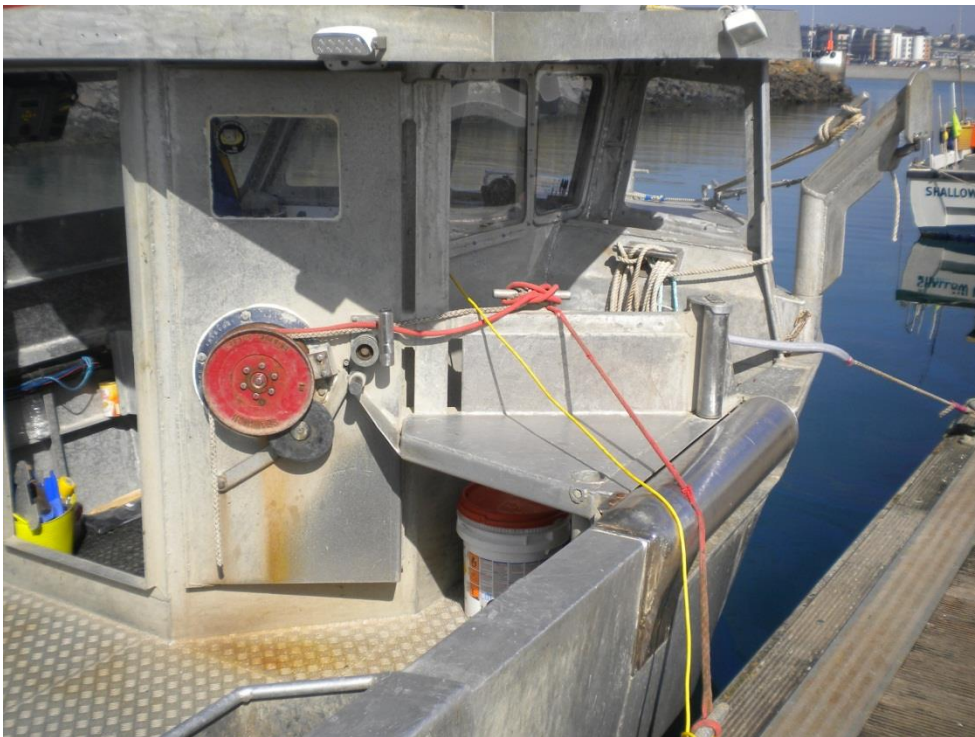
## Vertical guide rollers





# Review of Potting Haulers & Rollers

## Vertical guide rollers





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## Vertical guide rollers

### **Advantages:**

- Controls the angle of entry into the slave hauler
- Virtually eliminates the possibility for rope to jump out

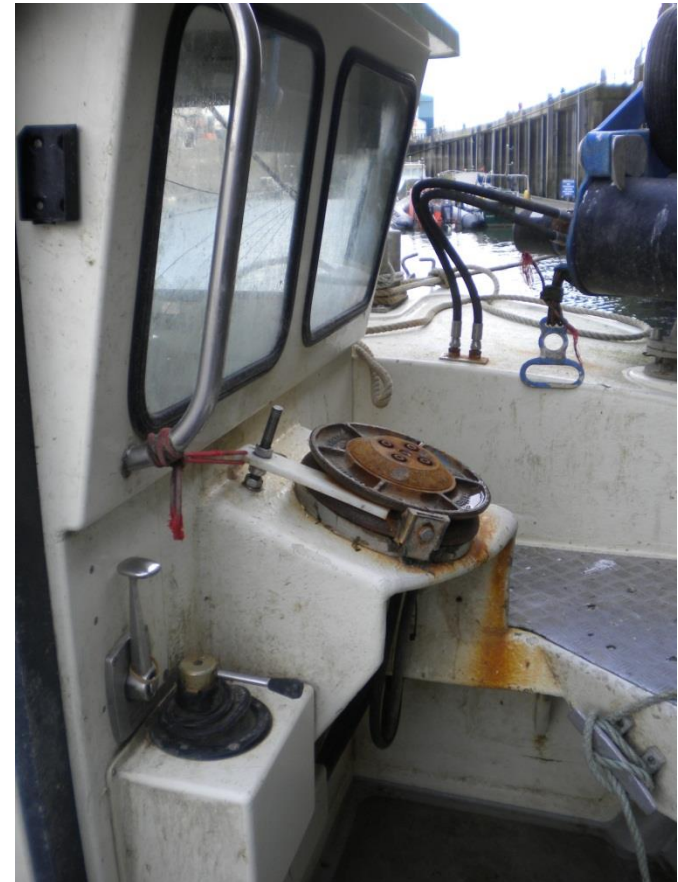
### **Disadvantages:**

- Reduces working area between roller and hauler
- Increases risk of fingers / pots getting trapped



# Review of Potting Haulers & Rollers

## Horizontally mounted slave:





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## Horizontally mounted slave:







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## Horizontally mounted slave:

### **Advantages:**

- Slightly angled horizontal plane ensures rope passing over roller aligns dead centre into slave hauler

### **Disadvantages:**

- Take up a bit more room
- Some believe increases risk of fingers getting trapped as could put hand down on it
- Extreme weather (rolling) can lead to ride out



# Review of Potting Haulers & Rollers

## Under and over design





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## Under and over design





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## Under and over design

### **Advantages:**

- Similar to vertical guide – controls angle of rope entering slave

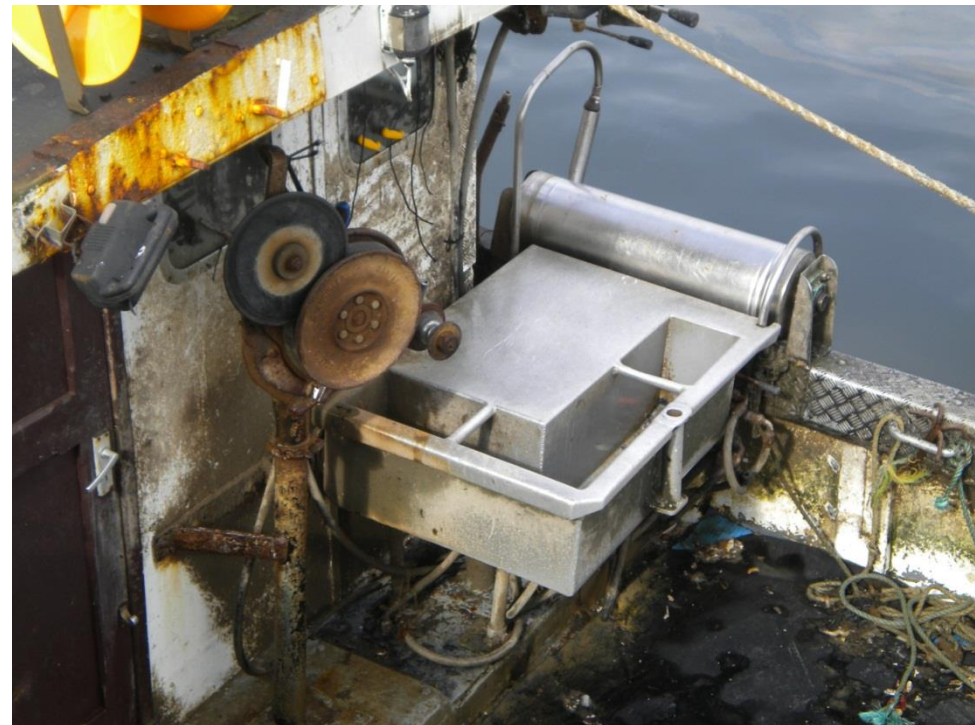
### **Disadvantages:**

- Additional finger / hand trapping risk
- Does not reduce problem 100%



# Review of Potting Haulers & Rollers

## Swivel hauler:





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## Swivel hauler:





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## Swivel hauler:

### **Advantages:**

- Slave hauler mounted on swinging p-bracket which allows it to follow the lead of the rope

### **Disadvantages:**

- Space limited on some vessels
- Strength of fit a concern (one skipper reported losing his over the side)



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## Other solutions:

- Proper use of mizzen sail
- Rigging of pots
- Change to operational practice
- Sensor / alarm development







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## Recommendations:

- i. Increase awareness amongst fishermen through *Fishing News* and revisions to Seafish material
- ii. Increase awareness amongst boat builders through revisions to Seafish material
- iii. Study of v-wheel haulers to determine ‘safe operating angles’ of ropes entering v-wheel haulers
- iv. Discussion with MMO over eligibility of hauler conversions for EEF grant aid



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## Next steps:

- i. Complete data collection
- ii. Re-draft Seafish technical note with new visual evidence (line drawings or photos)
- iii. Draft summary style report



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Questions?