Megadale

Concept for

Sustainable Kelp Harvesting

11/10/2012

Ref. 508.

Rev 0.

1.0 Introduction

Megadale has worked in the past on Seaweed Drying research and has extensive experience in innovative machine development in the Medical Device sector. We have been requested to lay out a concept for an environmentally friendly and sustainable method of harvesting Kelp from the sea bed and depths up to 15m.

The key points of this system are:

1. Kelp is harvested from a boat
2. The plants will be cut leaving at least 400mm uncut
3. Underwater cameras will allow real time inspection of harvesting conditions
4. The underwater equipment will be powered by compressed air.
5. The harvest will be on a 5 year rotation

2.0 Equipment Description

The illustrations show the harvesting unit positioned by a crane mounted on the back of the boat. Two lines supply air to the chopper pump and power and signals to the camera system.

The compressed air is used to draw the water and cut kelp up the delivery tube. It is discharged to net cages on deck, where it is dewatered. A band of 20 meters can be harvested by slewing the crane, as the boat traverses the harvest area.

Development of the chopper pump will aim to ensure that the kelp is cut rather than pulled, thus ensuring vigorous grow and regeneration after harvest.

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