A novel, autonomous and REVersible Inflow control VALve to increase oil production and reservoir recovery rate by stopping the production of unwanted water and gas locally in the reservoirs

Fact Sheet

Project Information

REVIVAL

Grant agreement ID: 605701

Status
Closed project

Funded under
FP7-SME

Start date
1 August 2013

End date
31 July 2015

Overall budget
€ 1 498 683

EU contribution
€ 1 158 000

Coordinated by
INFLOWCONTROL AS
Norway

Objective

REVIVAL focuses on the problem of maximising recovery of oil from wells and prolonging their productive life; a commercial imperative for the industry and a response to EU policies to secure Europe’s energy supply in respect to oil.

Globally only 32% of available oil reserves are extracted from oil fields. A 5% increase in the recovery factor would yield as much oil as is expected from all future exploration efforts.

The reason for low recovery rates is the breakthrough of water or gas in the well. The industry has addressed this by developing inflow control devices (ICD & AICD) that choke oil production both at start-up and when gas or water incursion occurs; but do...
choke oil production both at start up and when gas or water incursion occurs, but do not stop these entering the system.

Our innovative solution utilises the properties of fluid dynamics to create an Autonomous Inflow Control Valve (AICV) that, whilst remaining simple in concept, eliminates the weaknesses of AICD and ICD products. By comparison, proof of concept tests on our AICV show it will increase recovery, does not choke initial oil production, can stop gas and water completely, is autonomous, reversible, reliable and price competitive.

We have established the concept, but still face significant technical challenges which we need to outsource to specialist R&D partners. These involve developing an innovative laminar flow element, filters and seals that can withstand the harsh environments in wells.

REVIVAL enables our SME partnership to create a novel, highly differentiated, validated pre-production prototype that can be quickly commercialised post project completion, providing outstanding benefits for our own organisations, our oil company clients, national government exchequers and Europe as a whole. It responds to competitive threats we as SMEs face.

The primary market are oil company clients are receptive to a solution. The known market potential is €224 million within 5 years of project completion. Secondary markets exist in environmental protection from oil spillages.

Field of science

/social sciences/economics and business/business and management/commerce
/engineering and technology/environmental engineering/energy and fuels/fossil energy/gas
/natural sciences/physical sciences/classical mechanics/fluid mechanics/fluid dynamics

Programme(s)

Topic(s)

Call for proposal

FP7-SME-2013

Funding Scheme
Coordinator

INFLOWCONTROL AS

Address
Hydrovegen 55
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Norway

Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

EU contribution
€ 394 607

Website

Administrative Contact
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Participants (7)

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Activity type
Private for-profit entities
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EU contribution
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Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

EU contribution
€ 233 281

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EU contribution
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ANGLIA RUSKIN UNIVERSITY HIGHER EDUCATION CORPORATION

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EU contribution
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EU contribution
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EU contribution
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EU contribution
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