
Experiment de Faraday al tàmesi

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Un esbós del pioner elèctric Michael Faraday fent un experiment al riu Tàmesi en el pont de Waterloo. El dibuix mostra a Faraday vestit a la moda victoriana, amb barret de copa. Es troba al pont, mantenint un galvanòmetre, que està connectat a dos cables de coure que s'estenen cap als extrems del pont i després es connecten a cables que baixen a l'aigua. L'extrem connectats a unes plaques. L'experiment, realitzat el 1832, al riu Tàmesi en el pont de Waterloo, consistia en provar la hipòtesi que el flux del Tàmesi a través del camp magnètic terrestre generava un dèbil corrent elèctric. Atesa la poca sensibilitat del galvanòmetre l'experiment no va donar cap resultat concloent, però el principi era bo i avui dia es va servir en corredores nàutiques electròniques, ja que posteriorment, les proves a gran escala amb el cable telegràfic submarí van ser capaces de detectar el corrent .

Experiment de Faraday al Tàmesi

Faraday va realitzar en el pont de Waterloo al riu Tàmesi el 1832, un experiment que consistia en un galvanòmetre connectat a dos cables de coure que s'estenien cap als costats del pont i després baixaven a l'aigua amb els extrems connectats a unes plaques, per provar la seva hipòtesi de que el flux de l'aigua del Tàmesi a través del camp magnètic terrestre generava un dèbil corrent elèctric. Faraday va intuir que havia de fluir un corrent elèctric a través de les plaques situades en angle recte al corrent del riu.[4] Malauradament, quan Lord Kelvin va voler tornara reproduir l'experiment, no va poder detectar cap corrent.[5] Apart de que el llit del riu podia curtcircuitar bona part del senyal, no es va obtenir cap resultat concloent, atès que el corrent generat en un camp tan feble i amb un conductor d'una qualitat que es desconeix, seria difícil de mesurar fins i tot amb els instruments més sofisticats d'avui dia.[6] El principi però, era cert i va ser demostrat posteriorment, per les proves a gran escala fetes amb el cable telegràfic submarí que van ser capaces de detectar aquest corrent, i de fet, avui dia es fa servir en els cabalímetres magnètics i les corredores nàutiques electròniques.

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<https://www108.lamp.le.ac.uk/ojs1/index.php/pst/.../2105>

Tradueix aquesta pàgina

14 de nov. 2014 - The paper looks into Michael Faraday's attempted experiment in 1832 to ... detect a current from the interaction of the water in the River Thames ...

Michael Faraday's Waterloo Bridge Experiment - miSci - Museum of ...

<https://cdm16694.contentdm.oclc.org/digital/collection/.../327...>

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Title, Michael Faraday's Waterloo Bridge Experiment. Description, A sketch of electrical pioneer Michael Faraday performing an experiment using the Thames ...

Faraday's Synaptic Gap - Rick Myers

www.rickmyers.co.uk/work/faradays-synaptic-gap/

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Faraday's Synaptic Gap is a project that encompasses video and sound works, ... the Book Library, The Courtauld Institute of Art, on the north bank of the Thames. ... In 1832 Faraday conducted an experiment in which he suspended a length of ...

Science : Faraday's experiment - perplexus.info

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21 de maig 2011 - January 12th in 1832 Michael Faraday did the following experiment in London: He placed two copperplates in the Thames river at opposite ...

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Frederick G. Pohland - 1975 - ?Llegits

Today, there are a number of successful designs of electromagnetic flowmeters, all based upon Faraday's Law. All share ... adaptations were in sea-water applications such as oceanographic current meters and logs for indicating ships' speed.

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<https://books.google.es/books?id=zDNCAQAAIAAJ>

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1970 - ?Visualització de fragments - ?Més edicions

TRANS, papers. (Faraday measured the flow of the Thames at Waterloo Bridge with an instrument embodying the principles of modern electromagnetic flowmeter. This experiment was repeated by YOUNT et al. in 1920 and described in— YOUNT, GERARD and JEVOXS PHIL. ... 1249530, 1917 "Electromagnetic ship's log.

The Journal of Library History, Philosophy and Comparative Librarianship

<https://books.google.es/books?id=RHcaAAAAMAAJ>

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TRANS, papers. (Faraday measured the flow of the Thames at Waterloo Bridge with an instrument embodying the principles of modern electromagnetic flowmeter. This experiment was repeated by YOUNT et al. in 1920 and described in- YOUNT, GERARD and JEVONS PHIL. ... 1249530, 1917 "Electromagnetic ship's log.

<https://books.google.es/books?id=dx9VAAAAMAAJ>

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1974 - ?Visualització de fragments - ?Més edicions

Various electromagnetic flowmeters, sold in the USA and Canada by eight firms, are examined in detail. ... on Faraday's Law of Electromagnetic Induction for a conductor that moves through a magnetic field. ... In an experiment at Waterloo Bridge, he lowered large metallic electrodes into the River Thames and tried to measure the induced voltage produced by water flowing ... 1,249,530 for a "ship's log.

Developments in Flow Measurement: 1
- Edició 1 - Pàgina 211

<https://books.google.es/books?id=6rBRAAAAMAAJ>

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R. W. W. Scott - 1982 - ?Visualització de fragments - ?Més edicions

That this effect was equally valid for liquids was known by Faraday in 1832. ... across the Thames at Waterloo bridge, due to the motion of the water through the vertical component of the earth's magnetic field. ... A similar experiment was undertaken by Wollaston using the newly laid cross-channel telegraph cable. ... 2 In 1917 Smith and Slepian³ obtained a patent for an electromagnetic ship's log, which ...

<https://books.google.es/books?id=ZHPnAAAAMAAJ>

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Papers in Physical Oceanography and Meteorology Published by ...

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The deep sea electromagnetic method is based on a suggestion made by Faraday in the Bakerian Lecture of 1832 before the Royal ... in response to the water motions of the Thames, but the potentials developed at the copper electrodes he used masked the effect. ... Successful short range experiments were conducted in Dartmouth Harbor in 1918 by Young, Gerrard and Jevons (1920) who ... The potential difference changes sign when currents set the ship to port or to starboard.

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1861 - ?Llegits - ?Més edicions

In the pmlmy days of whale-fishing, when Britain sent several undrcd sail of ships to Davis's Straits, there was every spring ... row of lifted ports and log guns; audio this day we see in the paintin of the whaling- 'ps' boats some of the old love of display. ... After detailing experiments with various dycstum, he comes to the conclusion that they " demonstrate that an elective of electromagnetism, a science based upon the discoveries of flirsted and Ampere in 1820, and of A1130, Faraday, ...

https://books.google.es/books?id=Dj8_AQAAMAAJ

- Tradueix aquesta pàgina

1883 - ?Visualització de fragments - ?Més edicions

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