

Re: Maxwell's and Faraday's formulations of induction

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From: FrediFizzx (fredifizzx_at_hotmail.com)

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"Sergey Karavashkin" <selffrans@yandex.ru> wrote in message
news:a42650fc.0407111955.363f0bf7@posting.google.com...

| Dear Colleagues,

| We published a new study which considerably improves the basic idea of
| electromagnetic induction. You can find this material in our e-journal
| SELF Transactions, volume 4 (2004), paper

| Experimental study of electromotive force induced by inhomogeneous
| magnetic field

| *Abstract*

| We will consider two formulations of induction law: differential,
| based on Faraday conception of wire interaction with magnetic field,
| and integral, based on Maxwell conception of interaction of the loop
| area with the crossing flux.

| Using the models of rectilinear loop with a movable side and of
| unipolar generator, we will show that Maxwell conception remains true
| exceptionally for the loop with a movable side in a permanent
| homogeneous magnetic field. Only for such model this formulation
| predicts the same results as Faraday formulation does. At the same
| time, Faraday formulation is true for a broad class of models in
| homogeneous and inhomogeneous magnetic fields.

| To check it experimentally, we developed a set with the transforming
| secondary loop and put it into an inhomogeneous time-variable magnetic
| field. Obtained experimental results will unambiguously corroborate
| that Faraday conception reliably describes the induction process on
| the basis of wire interaction with magnetic field, and that Maxwell
| integral conception is illegal.

| Obtained experimental results have also corroborated that it is legal
| to use the compensation loop with a single probe in studying the local
| magnetic fields, which we used in the before study of induction in an
| air gap of transformer.

sci.physics: Re: Maxwell's and Faraday's formulations of induction

| Please read the full text of this paper on

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| http://angelfire.lycos.com/la3/selftrans/v4_1/contents4#emf

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FrediFizzx