

MALAHIDE,  
ENGLEFIELD GREEN,  
SURREY.

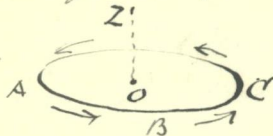
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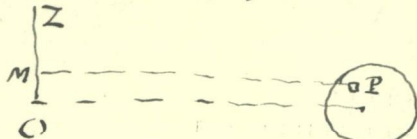
$\phi$ ,

Just a line to ask a question:

If a current runs  
in a wire bent  
into form of a  $\odot$ ,



is the current-density constant at all pts  
of the cross-section of the wire, or does it  
vary inversely as the distance of the point  
from the central axis,  $OZ$ , of the current?



Then, if  $P$  is a point in the  
cross-section through which the current  
runs  $\perp$  to plane of paper, is the density at  $P$

inversely as  $EM$ ? Or how does it  
vary?

I have written a paper (not yet read  
at Physical Soc.<sup>y</sup>) in wh. I have  
assumed density constant; but I  
think that I must modify it.

In case of alternating currents, or  
of the initial stage of a current  
before it becomes steady, would the  
density of the current (wh. is then  
only a superficial current) be  
constant.

Please reply at once.

M.

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