

ESTIMATES OF THE MODULUS OF CONTINUITY OF THE LOGARITHMIC DOUBLE LAYER
POTENTIAL IN THE CLOSURE OF DOMAIN

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For the real part of the Cauchy-type integral, which is known to be the logarithmic double layer potential, we obtain estimates of the modulus of continuity in the closure of domain bounded by an Ahlfors-regular integration curve. These estimates are more exact than the well-known Zygmund estimate for the modulus of continuity of the Cauchy-type integral. The accuracy of estimates for the logarithmic double layer potential is proved by constructing an example of a curve and an integral density for which the specified estimates are exact with respect to the order of smallness.

The talk is dedicated to the memory of Professor Oleg Gerus from Zhytomyr, Ukraine.

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