BOUNDLESSNESS OF GENERALIZED RIESZ
POTENTIALS OF FUNCTIONS IN MORREY SPACES
$L^{1,\varphi;\kappa}(G)$ OVER NON–DOUBLING MEASURE SPACES

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Abstract. Our aim in this paper is to deal with the boundedness of generalized Riesz potentials $I_{\rho,\mu,\tau}f$ of functions in Morrey spaces $L^{1,\varphi;\kappa}(G)$ over non-doubling measure spaces, as an extension of [4, 6, 9, 12, 19]. The local integrability is assumed to be minimal, so that the results can not be obtained by the Hardy-Littlewood maximal operator. What is new in this paper is that $\varphi$ depends on $x \in X$ and that the underlying measure $\mu$ is not doubling.


Keywords and phrases: Sobolev embeddings, Morrey space, Orlicz space, Riesz potential, fractional integral, non-doubling measure.

REFERENCES


