

ADAMS TYPE RESULT FOR SUBLINEAR
OPERATORS GENERATED BY RIESZ
POTENTIALS ON GENERALIZED MORREY
SPACES

Abstract

In this paper the authors study the boundedness for a large class of sublinear operators T_α , $\alpha \in (0, n)$ generated by Riesz potential operator on generalized Morrey spaces $M_{p, \varphi}$. We prove the boundedness of the sublinear operator T_α , $\alpha \in (0, n)$ satisfies the condition (1.2) generated by Riesz potential operator from one generalized Morrey space $M_{p, \varphi^p}^{\frac{1}{p}}$ to $M_{q, \varphi^q}^{\frac{1}{q}}$ for $1 < p < q < \infty$ and from $M_{1, \varphi}$ to $WM_{q, \varphi^q}^{\frac{1}{q}}$ for $1 < q < \infty$. In all the cases the conditions for the boundedness are given in terms of Zygmund-type integral inequalities on φ , which do not assume any assumption on monotonicity of φ in r . Conditions of these theorems are satisfied by many important operators in analysis, in particular fractional maximal operator, Riesz potential operator and Marcinkiewicz operator.