FRACTIONAL MAXIMAL OPERATOR AND FRACTIONAL INTEGRAL OPERATOR ON ORLICZ–LORENTZ SPACES

HONGLIANG LI

Abstract. In this paper, we prove the characterization of the weighted modular inequalities for the fractional maximal operator $M_{\alpha}$ ($0 \leqslant \alpha < n$) on the Orlicz-Lorentz spaces by atomic decomposition which induces a sufficient condition of the boundedness for this operator on the Orlicz-Lorentz spaces. And we also find the characterization of the weighted modular inequalities for the fractional integral operator $I_{\alpha}$ ($0 < \alpha < n$) on the Orlicz-Lorentz spaces in certain case which leads to a sufficient condition of the boundedness for $I_{\alpha}$ ($0 < \alpha < n$).


Keywords and phrases: Orlicz-Lorentz spaces, fractional maximal operator, fractional integral operator, modular inequalities, boundedness of operator.

REFERENCES


