Anna Tarasenko* (anataras@uaeh.edu.mx), Institute of Basic Sciences and Engineering, Mathematical Research Center, Carretera Pachuca-Tulancingo, Km.4.5, 42184 Pachuca, Hidalgo, Mexico, and Oleksandr Karelin (karelin@uaeh.edu.mx), Institute of Basic Sciences and Engineering, Engineering Research Center, Carretera Pachuca-Tulancingo, Km.4.5, 42184 Pachuca, Hidalgo, Mexico. On Inequalities between Norms in Weighted Hölder and Lebesgue Spaces for Operators with Endpoint Singularities.

The norms in the Hölder spaces with weight and in the Lebesgue spaces with weight are different in their character and the presence of a direct connection between the norms of these spaces should not be expected. However, in this work, a special class of operators was found, for which we obtained an inequality that connects the norms in weighted Lebesgue spaces and the norms in weighted Hölder spaces for this class of operators. A description of such operators and a relation among parameters of these spaces are given. Integral operators with local endpoint singularities belong to the considered class. These results can be used in the study of operators in weighted Hölder spaces, on the basis of known results for operators in weighted Lebesgue spaces. (Received September 14, 2015)