On the approximation by Euler, Borel and Taylor means in enlarged Hölder classes

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Let f be a continuous and 2π-periodic function. Denote by $S_n(x) = S_n(f,x)$ the n-th partial sum of Fourier series of function f.
Let $A = (a_{nk})$ be an infinite matrix. The A-transform of the Fourier series is given by

$$A_n(f,x) = \sum_{k=0}^{\infty} a_{nk} S_k(x),$$

where A can be the Euler the Borel or the Taylor matrix. As a measure of Hölder norm approximation by $A_n(f)$ the generalized modulus-type functions are used. The obtained results generalized and improved in some case the results of Mahapatra and Chandra [2].

References

[1] L. Leindler, Generalizations of Prössdorf's theorems, Studia Sci. Math. Hung. 14 (1979), 431-439.

[2] R. N. Mahapatra and P. Chandra, Hölder continuous functions and their Euler, Borel and Taylor means, Math. Chronicle 11(1982) Part 2, 81-96.

[3] B. Szal, On the strong approximation of functions in generalized Hölder spaces, Math. Japonica 52(2) (2000), 231-239.