inequality for entire functions of exponential type.

Let $f$ be a polynomial of degree $n$. It is well known that \[ \int_{-\pi}^{\pi} |f'(e^{i\theta})|^p \, d\theta \leq n^p \int_{-\pi}^{\pi} |f(e^{i\theta})|^p \, d\theta. \] Let $g$ be an entire function of exponential type $\tau$ such that $g \in L^p(\mathbb{R})$ where $p > 0$. As an extension of the above inequality for entire functions of exponential type $\tau$, it is also well known that \[ \int_{-\infty}^{\infty} |g'(x)|^p \, dx \leq \tau^p \int_{-\infty}^{\infty} |g(x)|^p \, dx. \] A polynomial $f$ of degree $n$ is called a self-reciprocal if it satisfies the condition $f(z) = z^n f(1/z)$. Lately, many papers have been written on these polynomials. If $f$ is a self-reciprocal polynomial, then $g(z) := f(e^{i\tau})$ is an entire function of exponential type $n$ such that $g(z) = e^{i\tau z} g(-z)$. Govil [N. K. Govil, $L^p$ inequalities for entire entire functions of exponential type, Math. Inequal. Appl. 6 (2003) 445-452] studied the class of entire functions $g$ of exponential type satisfying the condition $g(z) = e^{i\tau z} g(-z)$. We will discuss $L^p$ inequalities for self-reciprocal polynomials and entire functions of exponential type discussed by Govil.

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