

# ON INEQUALITIES BETWEEN "WEIGHT" NORMS OF PARTIAL DERIVATIVES OF DIFFERENTIABLE FUNCTIONS

## Abstract

*One form of "weight" integral representation of differentiable functions  $f = f(x)$  at the points  $x = (x_1, \dots, x_n) \in G \subset E_n$  is cited, and by means of this integral representation, validity of imbedding theorem type "weight" integral inequalities*

$$\|b(\cdot) D^\nu f(\cdot)\|_{L_q(G)} \leq c \left\{ \sum_{k=0}^n h^{\alpha_k} \left\| b_k(\cdot) D^{m^k} f(\cdot) \right\|_{L_p(G)} \right\}, \quad (0.1)$$

$$D^\nu : \bigcap_{k=0}^n L_P^{\langle m^k \rangle} (G; b_k) \subset L_q (G; b). \quad (0.2)$$

*are proved.*