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### **Estimates of Quasiconvex Polytopes in the Calculus of Variations**

We give direct estimates for the quasiconvex polytopes  $Q(K)$  generated by a finite set  $K \subset M^{N \times n}$ . More precisely, we bound the quasiconvex envelope  $Q \operatorname{dist}(\cdot, K)$  near a convex exposed face of  $C(X)$  which does not have rank-one connections. Our estimates depend on the weak-(1,1) bounds for certain singular integral operators and the geometric features of the convex polytope  $C(K)$ . We show by an example that our estimate is ‘local’ and independent of the ‘size’ of  $K$ , hence it is a better estimate than the polyconvex hull  $P(K)$  which is ‘size’ dependent.

**Keywords:** Direct estimates, quasiconvex polytopes, quasiconvex envelope, singular integral operators, polyconvex hull.