REGULARITY ISSUES FOR ORTHOTROPIC FUNCTIONALS

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We present a class of integral convex functionals from the Calculus of Variations, exhibiting a severe degeneracy, in despite of their very simple structure. We discuss gradient regularity for local minimizes, by giving some boundedness and continuity results. The case of nonstandard growth conditions is included, as well. In the final part, we will present some perspectives and open problems.

The results presented are part of a research project headed in collaboration with Pierre Bousquet (Toulouse).