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Classical families of univalent functions in the Hornich space. (English)  
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The simple structure between some convex sets in a Banach space introduced by Hornich is used to determine the extreme points of these families, namely for  $K(\alpha)$ , the set of convex functions of order  $\alpha$ , and for  $V(k)$ , the set of functions with bounded boundary rotation  $k\pi$ . For  $C(\beta)$ , the set of close-to-convex functions of order  $\beta$  a partial result is given.

It is interesting to note that the results for  $K(\alpha)$  and  $V(k)$  agree with those that hold for the usual linear structure and the topology of locally uniform convergence. In this case, for  $k \in ]2, 4[$  the question of determining the extreme points of  $\overline{c\partial}V(k)$  is still open.

*Keywords* : Hornich space; Riesz-Herglotz representation; extreme points; functions with bounded boundary rotation; close-to-convex functions

*Classification*:

- 30C45 Special classes of univalent and multivalent functions