Let $S_0(R)$ be the class of all functions analytic and univalent in the unit disc $D$ that satisfy the conditions

(i) $f(z) = 1 + \sum_{k=1}^{\infty} a_k z^k$,  
(ii) $a_k = \bar{a}_k$,  
(iii) $0 \not\in f()$.

The author shows that (i) every extreme point of $S_0(R) \cup \{1\}$ has the form

$$(1 + z)^2 [(1 - z)(1 - \bar{z})]^{-1} \text{ or } (1 - z)^2 [(1 - z)(1 - \bar{z})]^{-1}, \quad y \in \partial \setminus \{1\}.$$ 

(ii) Every support point of $S_0()$ has the form

$$1 + k z [(1 - yz)(1 - \bar{y}z)]^{-1} \text{ for some } y \in \partial$$

and $k \in [-2(1 - \text{Re } y), 2(1 + \text{Re } y)]$, $k \neq 0$. The main tool used here is a result of L. Brickman [Bull. Am. Math. Soc. 76, 372-374 (1970; Zbl 189, 88)].

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Classification:

- 30C45 Special classes of univalent and multivalent functions
- 30C75 Extremal problems for (quasi-)conformal mappings, other methods