



**Example 188 :** As shown in Figure 1,  $SB$  and  $SC$  are two tangents of the circumscribed circle  $O$  of  $\triangle ABC$ ,  $B$  and  $E$  are symmetrical about  $AC$ ,  $C$  and  $F$  are symmetrical about  $AB$ , and  $BF$  intersects  $CE$  at  $D$ . Prove:  $B, C, D, S$  are in a circle.

Proof: 
$$\frac{\frac{B-S}{C-S}}{C-E} = \frac{\frac{B-A}{B-F} \frac{C-B}{C-A} \left( \frac{A-C}{A-B} \right)^2}{\frac{B-A}{B-F} \frac{C-E}{C-A} \frac{S-C}{B-S}},$$

Explanation: It is also possible to study the four points of  $F, E, D$ , and  $S$  sharing a circle, and the five points of  $B, C, D, S$ , and  $O$  sharing a circle.