

New Mixing Screw Element “BMS”

BMS = Backward Mixing Single flight screw

1. Introduction

Kneading disks “KD” and rotors are generally used in extruder screws for various compounding processes such as glass fiber compound and polymer alloy. However, as for recent trends, the conventional technologies are not good enough in some cases because of severe conditions in the kneading section of extruders for the following reasons;

- 1) To sophisticate conventional products, the material compositions become hard-to-compound.
- 2) Extruders are downsized for small-lot production of a wide variety of products.
- 3) The productivity has been increased in small extruders. (Higher output capacity)

As one of the means to solve the problem, we introduce here the new mixing screw element “BMS”.

2. Advantages of BMS

- 1) BMS allows gentle mixing by stirring with a number of notches, not by shearing force at the tips on the conventional KD.
- 2) BMS can reduce irregular mixing with less short paths compared with the conventional KD, leading to uniform mixing at the same level as KD even with shorter L/D. We believe BMS is most suitable for glass fiber compound.
- 3) BMS in multistage arrangement can deal with the compounding of materials with great difference in viscosity. It is favorable for compounding with oil or liquid fire retardant.
- 4) BMS can be applied to various applications by changing flight lead, number of notches and flow direction.

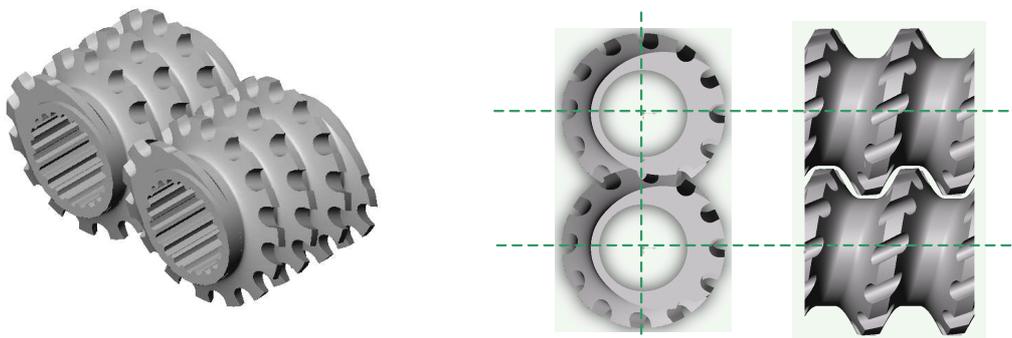


Fig. 1 View of BMS

Technical Information

3. Conclusion

We believe that BMS must be an indispensable technology for the stable production of high quality compounds. If you are not satisfied with the present quality of products using the conventional compounding technology, would you try BMS? The test machines with BMS are available for your trial in our Plastics Technology Developing Center in Germany, USA and Japan.