

英语学习

英语翻译技巧(11)

涂学忠

(化工部北京橡胶工业研究设计院 100039)

2.4 INTERNAL MACHINE MIXING

With internal mixers having low rotor speeds and low ram thrust, a batch of compound can take from, say^①, 5 min to 10 min to mix. An error of $\frac{1}{2}$ min in dumping the batch on a 10 min cycle does not often prove overcritical, and an extra $\frac{1}{2}$ min does not result in a marked temperature increase in the compound when dumped^②. However, as mixing cycles are reduced, it becomes increasingly important to control the time because this same time error on a short cycle of, say, 2 min is far more important than on a longer cycle of 10 min.

Since one of the main problems with internal mixers is to achieve enough cooling, it is not considered necessary to pre-heat the machines for most rubbers^③. The full operating temperature, and consequently minimum mixing cycle, is achieved after about five consecutive batches starting from a cold machine under full cooling conditions^④.

On the short mixing cycles it becomes impractical to work to a fixed mixing time, because of the large change in rate of mixing with increasing mixing temperature of the mixer^⑤. Two methods other than time are used to determine the end of a mixing cycle: the integrated power input into the machine, and the temperature of the compound. It is found that the completeness of mixing correlates reasonably well with both the amount of power consumed and the

batch temperature.

Experience has shown that time cycles established as correct when using a cold internal mixer result in compounds scorching as the mixer warms up, after perhaps three or four batches; on the other hand, if the mixing cycle is based on time fixed for the mixer when it is hot, then the first batch or two may be found to be incompletely mixed (Evans, 1969-4).

生 词

internal mixer	密炼机
batch	批料, 车料
dump	排料
overcritical	过分危险, 超过临界点
integrated power	功率积分
correlate with	与……相关
scorch	焦烧, 早期硫化

译 文

2.4 密炼机混炼

采用低转速和低压砵压力的密炼机, 混炼一个胶料所用时间, 比方说^①, 为 5 到 10min。混炼周期为 10min 的一个料, 其排料时间误差半分钟往往不会显示出过分危险(超过临界点), 超过半分钟排料不会导致胶料温度明显上升^②。但是随着混炼周期缩短, 时间控制就愈来愈重要, 因为同样半分钟的误差对短周期, 比方说 2min, 就比对 10min 的较长周期重要多了。

因为密炼机的主要问题之一是要获得充

分冷却,所以混炼大多数胶种都不必预热机器^⑤。从充分冷却状态下开始作业的冷机器,约连续混炼5个胶料后便可达到最高操作温度,因而也就达到了最短的混炼周期^⑥。

混炼周期短,采用固定的混炼时间是不切实际的,因为随着密炼机混炼温度升高,混炼速度有很大变化。除时间外,还有两种方法用于确定混炼周期的终点:输入机器的功率积分和胶料温度。发现混炼程度与功率消耗量和胶料温度这两者相关性都很好。

经验表明,用于冷密炼机适宜的时间周期,可能在混炼3~4个胶料密炼机温度升高后,使胶料焦烧;反之,如果混炼周期是根据热密炼机操作时间定的,则会发现头1~2个胶料混炼不完全(Evans, 1969-4)^⑦。

注:①此处“say”为插入语,意为“比方说”。

②此句中“prove overcritical”为系表结构,“prove”直译为“证明”,但为了文字更通顺译为“显得”;“when dumped”=“when it is dumped”。

③此句中“it”为先行词“to pre-heat the machines for most rubbers”是真正主语,“necessary”为宾语补语;句末“rubbers”为“胶种”,“rubber”在不同场合可分别译为“生橡”、“橡胶”、“胶料”等。

④“consequently minimum mixing cycle”是“the full operating temperature”的同位语;“starting from a cold machine under full cooling conditions”为现在分词短语作状语。

⑤分号前后为并列复合句。第一个分句

中,“experience has shown”为主句,“that”引出一个宾语从句,“established as correct when using a cold internal mixer”为过去分词短语作定语,修饰宾语从句中的主语“time cycles”,“result in compounds scorching”为宾语从句的谓语部分;“as the mixer warms up, after perhaps three or four batches”为宾语从句的时间状语从句。第二个分句中,“if the mixer cycle……is hot”为条件状语从句,其中包括一个由“when”引出的时间状语从句,“then the first……mixed”为主句,其中“to be incompletely mixed”为宾语补语。

英译汉常见错误实例

…… while the pneumatic and other types of tyres, of all types of rubber articles, are among the most complex in design and varied in service conditions.

误:……然而充气的和其它类型的轮胎,所有的橡胶制品是设计最复杂,使用条件多变。

正:……而充气轮胎和其它类型的轮胎则属于所有橡胶制品中最复杂,使用条件多样化的产品。

注:①“of all types of rubber articles”是句末附加语(定语)挪到前面来的插入部分,故用两个逗点分开。

②全句的主语是“the pneumatic and other types of tyres”,谓语动词是“are”,表语成分是“among the most complex in design and varied in service conditions”。