

英语学习

英语翻译技巧(九)

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2.2 MASTICATION

The mastication stage in processing is, in general, only applied to natural rubber, and the internal mixer is an efficient machine for this. The quicker energy can be put into the rubber, the shorter the masticating cycle; the limitations to shortening the mastication cycle are the time to load the machine, and the handling of the rubber after discharge from the mixer^①.

The shape of the rubber being loaded and the bulk density of the rubber affect the loading of the machine^②. The modern 32 kg bale of natural rubber is ideal for loading whole into the type of mixer referred to, or alternatively rubber cut from larger bales to the same shape^③. Wedge-shaped pieces of rubber as obtained from a star-bladed bale cutter are totally unsuitable, as these become fast in the throat of the machine^④.

The low bulk density of certain crepes means that, to obtain similar batch weights, larger volumes must be loaded into the machine than for other higher-density rubbers. These low-density rubbers can take longer to load than to masticate, and hence are at an economic disadvantage in processing.

The handling and storage of masticated rubber in sheet form is not very satisfactory unless the viscosity and dimensional stability of the rubbers can be assured^⑤. Mastication costs money—it reduces the viscosity, but at the same time results in a reduction in many physical properties of the finished vulcanisate. If the viscosity reduction is ob-

tained by using softeners, then a saving in compound volume cost results^⑥. The reduction in physical properties of the vulcanisate is probably no greater from using softeners than from extra or separate mastication of the polymer.

With the availability of constant-viscosity and low-viscosity natural rubber (Section 4.1.5.1) and of synthetic rubbers of suitable viscosity for direct mixing, the need for mastication may well be eliminated in due course.

When the bulk of mixing is done on open mills, rubber is masticated to improve the rate of addition of powders. Owing to the increased softening obtained by cooling and remilling, a separate mastication process is advantageous, especially if this is done in an internal mixer or Gordon plasticator. Incorporation of large quantities of process oils can be time consuming on a mill, so mill mixing cycles are generally shorter if small quantities of oil are used and if the rubber is adequately masticated. Modern internal mixers enable oil to be incorporated into rubber quickly so that the reverse applies and mastication is less important^⑦.

生 词

bulk density	堆积密度, 视密度
referred to	所述的, 所指的
bale	胶包
wedge-shaped	楔形
star-bladed bale cutter	星形切胶机
throat	喉部

fast	卡死,固定
crepe	绉片(胶)
handling	搬运,加工
masticate	塑炼
viscosity	粘度
softener	软化剂
bulk	大(批)量
soften	软化
remilling	回炼,热炼
plasticator	塑炼机
reverse	逆混炼

译 文

2.2 塑炼

在加工过程中,通常仅对天然胶进行塑炼,而密炼机是一种高效塑炼机器。能量输入胶料愈快,塑炼周期便愈短;装料时间和胶料排出密炼机以后的加工限制了塑炼周期的缩短^①。

投入的生胶的形状和生胶的堆积密度影响了密炼机的填充量^②。现代 32kg 一包的天然胶,整块投入前面所述的这种型号的密炼机,或用较大的胶包切成与 32kg 的胶包相同的形状投入都是理想的^③。用星形切胶机切的楔形胶块是完全不适宜的,因为它们会卡住机器的喉部^④。

使用某些低密度的绉片胶,投料的体积必须大于密度较高的橡胶才能获得相同的批料重量。这些低密度橡胶的投料时间可能比塑炼时间还长,因此不利于加工的经济性。

只有塑炼胶片的粘度和尺寸稳定性得到保证,才便于贮运^⑤。塑炼是要花代价的,它虽然降低了粘度,但同时也引起了最终硫化胶许多物理机械性能的下降。如果使用软化剂降低粘度,则可降低胶料的体积成本^⑥。而且,使用软化剂造成的硫化胶性能下降可能不会比对生胶进行分段塑炼大。

随着恒粘度和低粘度天然胶以及粘度适于直接混炼的合成胶的出现,已可能在适当的时候取消塑炼。

在开炼机上进行大批量混炼,生胶须经过塑炼,以提高其吃粉速度。由于经过冷却再返炼可提高胶料软化程度,所以采取分段塑炼是有利的,如用密炼机或 Gordon 塑炼机进行分段塑炼尤为有利。在开炼机上添加大量的操作油很费时间,因此如果只添加少量操作油而且对生胶进行充分的塑炼可缩短开炼机的混炼周期。现代密炼机能使油很快地混入胶料,因此可采用逆混工艺,而且塑炼就不那么重要了^⑦。

注:①此句分号前为比较状语从句。在分号后的句子中“limitation”是具有动词性的名词,“to shortening……”是它的介词宾语,“hand—ling”在此处意为加工。

②“being loaded”为现在分词短语作后置定语修饰“rubber”。

③“ideal for loading……”为形容词介词短语作表语,“whole”是名词,作动名词“loading”的宾语,“referred to”为过去分词作后置定语修饰“mixer”,“rubber cut from……”中的“cut from……”也是过去分词短语作后置定语,这部分的谓语与前面相同,被省略。

④此句中“fast”不是通常“快”的意思,而是“固定”、“卡住”。

⑤此处“handling”的意思与前面不同,应作“搬运”解。

⑥此句主句的谓语动词是句尾的“results”。

⑦“to be incorporated……”为不定式短语作宾语补足语,与“oil”共同构成复合宾语,从句中“reverse”=“reverse mixing”,意为“逆混”。

小 词 典

——汽车实用英语

小客车	automobile, motor car, passenger car, passenger automobile, small passenger car
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小型小客车	subcompact car, compact car, compact
微型小客车	lilliput car, midget car, minicar, cycle car, mini, baby car
轻型小客车	lightweight car
轿式小客车	convertible car
标准型小客车	standard car
小排量小客车	light car
中型小客车	intermediate car, intermediate-size car
大型小客车	full-size car
单座小客车	one-seater
单排两座两门小客车	coupe two seater
单排座的双门箱式车身小客车	coupe

英译汉常见错误实例

For ozone resistance, *p*-phenylenedia-

mines may sometimes be used, but a more effective type of antidegradant for these systems has been discovered, patent protection for which is currently being sought.

误:若要求耐臭氧,有时也可用对苯二胺,但已求得这种体系用的比较有效的防降解剂,目前为此正在寻求更好的防护。

正:有时可用对苯二胺作防臭氧剂,但现在已找到一种更加有效的防臭氧剂,并正为之申请专利。

注:①此处“more”是指比对苯二胺更有效,因此必须译成“更加”。

②“discovered”应译为“找到”或“发现”。

③“patent protection”是“专利保护”的意思,“寻求专利保护”可意译为“申请专利”。

④“which”代的是前面所说的“more effective type of antidegradant”。

相关行业

汽车车速与

交通安全

汽车轮胎与路面的抓着系数随路面的状况而变化。例如,在清洁干燥路面上,抓着系数高达 0.7~0.8;在冰雪覆盖的路面上,抓着系数降为 0.1~0.2。试验结果表明,抓着系数随车速的增高而减小,在潮湿路面上尤为明显,车速每增加 20km/h,抓着系数则下降 0.1。

司机都有这样的感受:当汽车在潮湿路面上高速行驶时,会出现车轮打滑现象。其原因是车速高时,与路面接触的轮胎胎面花纹内形成水膜,该水膜不能很快地被完全挤出而集聚在车轮底下产生一种浮力,当浮力超过车轮的压力时,轮胎接地面积减小,使抓着系数减小。特别是在车速达到最高时,会感到轮胎脱离路面,汽车“漂”起来了。前轮好象失去了控制,汽车制动就很困难。这种失控现

象,对轻型车来说,大致发生在车速 130~140km/h;如果轮胎磨损严重,会在车速 100km/h 时出现。此时,一旦制动,汽车就会横向侧滑,极易发生交通事故。据资料统计,在较滑路面上因汽车打滑引起的交通事故占 20%~60%。

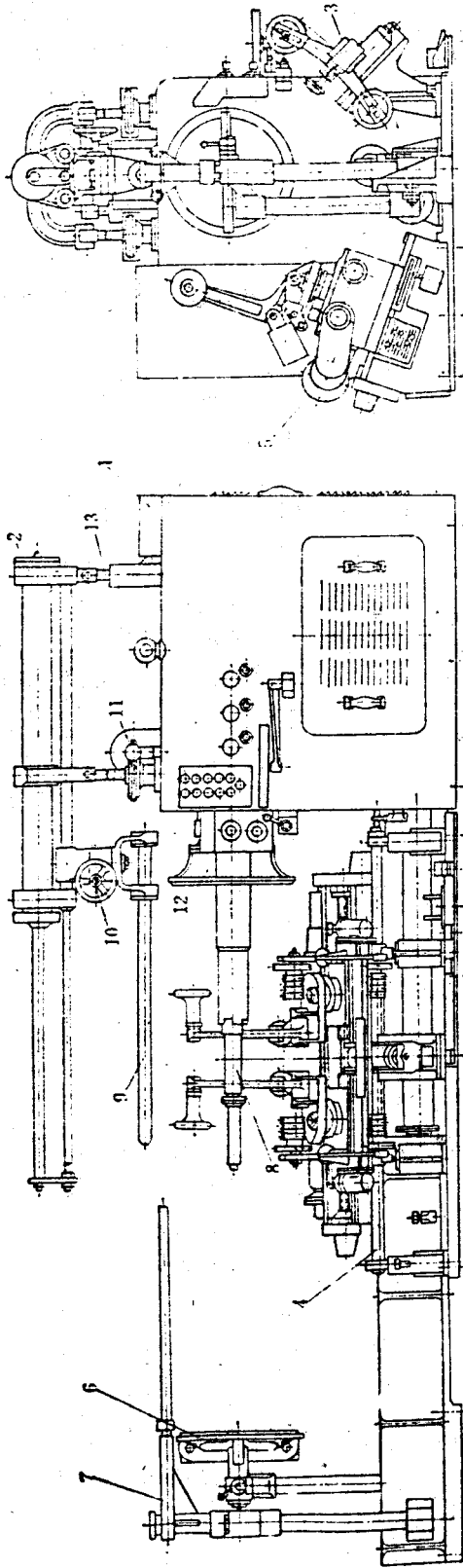
轮胎与路面的抓着系数对制动距离也有很大影响,因为制动距离随车速的平方成比例增加。车速高,轮胎与路面接触变差而使抓着系数减小,也就是使汽车操纵稳定性恶化,出现打滑危险。因此,要求汽车车速为 37km/h 时,抓着系数最小允许值为 0.35,此时制动距离最大允许值为 4.05m。

为使汽车的制动距离不超过最大允许值,一般来说安全速度为:干燥路面 60km/h,潮湿路面 50km/h,积雪路面 40km/h,薄冰路面 30km/h。司机在选择车速时,不仅要考虑路况,还要考虑交通密度及道路设施等因素。

摘自《天津汽车》

看图学英语

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轮胎成型机 Tyre Building Machine

1—机箱 Headstock; 2—成型棒装置 Poke-bar unit; 3—1号帘布筒正包装置 No. 1 band turn-down device; 4—下压辊装置 Bottom stitcher; 5—后压辊装置 Rear stitcher; 6—外扣圈盘及卸胎装置 Outside head setter and tyre unloader; 7—帘布筒挂架 Band hanger; 8—主轴 Shaft; 9—成型棒 Poke-bar; 10—手轮 Hand wheel; 11—蜗轮减速器 worm gear reducer; 12—内扣圈盘 Inner head setter