

英语学习

英语翻译技巧(23)

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It can happen that the loads on the calender roll are approximately equal to the weight of the roll^①. Under these conditions, small changes in running or compound conditions can result in the upper of two rolls being a 'floating' roll^②. With shell bearings there must be a clearance. It is hardly likely to be less than 0.4 mm and can be 10 times as high as this in a calender requiring reconditioning^③. It is not possible to work to tolerances of 0.025—0.050mm when the roll itself can be lifting under the compound pressure and falling under its own weight as the run proceeds. If a roll is floating, conditions such as temperature or running speed must be changed to maintain the roll at the top or bottom of its bearings. The other alternative is to overcome the problem mechanically by a pre-loading device which keeps the top nip roll in the up or down condition at all times^④.

Calenders for rubber compounds normally produce sheet of thickness in the range 0.1—1.5 mm. Both these dimensions, however, are very dependent upon the quality of sheeting required and the characteristics of the compound^⑤. Generally, the loads to produce thicknesses less than 0.1 mm become so heavy that the normal design of rubber calender does not permit them, even with the rolls screwed tightly together before rubber is added to the nip^⑥. The upper limit arises from air entrapment in the form of 'pea blisters'.

The incidence and size of blisters is reduced by reducing temperatures, but then it becomes very difficult to produce a calendered sheet without a roughness known as 'crow's feet'. Under these conditions, an alternative is to wrap the sheeting tightly in a liner in a warm state, preferably a textile liner which can 'breathe'^⑦. This causes the blisters to burst, and the holes so formed to fill in with compound over a period of time^⑧. Because, as the sheeting thickness increases, the blisters become more prevalent, thick sheeting is normally produced by 'plying up' two or more layers of compound to give material of the right overall thickness. No matter how the plying up is done, there is a potential weakness in the material and delamination sometimes occurs. Air traps between plies can also present problems. Plying up can be done as a separate operation between pairs of rolls, metal-or rubber-covered, or it can be done with an extra calender roll, or with a cloth-or rubber-covered roll on the calender which applies pressure to the sheets.

生 词

running	操作
floating roll	浮辊
shell bearing	密闭式轴承
recondition	修理, 重磨
pre-loading device	辊筒定位装置, 预加载装置
screw	拧紧, 靠紧

pea blister	豆状气泡
incidence	发生率
'crow's feet	枫叶纹, 爪形条纹
breathe	透气, 呼吸
plying up	贴合
delamination	脱层

译文

偶尔压延机辊筒承受的负荷可能和辊筒的重量大致相等^①。在此条件下,操作或胶料条件的微小变化都会使两个辊筒中的上辊成为“浮辊”^②。如使用密闭式轴承,则必须有间隙。该间隙不能小于 0.4mm,而在压延机需要修理时,轴承间隙可能是此值的 10 倍^③。操作中,如辊筒在胶料压力下能自己升起并在自身重量作用下下降,则不可能按照 0.025—0.050mm 的公差生产。如果辊筒浮起,为了使该辊筒保持在其轴承的顶部或底部,必须改变温度或转速等条件。另一种可供选择的方法是采用辊筒定位装置,用机械方法解决上述问题。辊筒定位装置可使上辊隙辊筒一直保持在轴承的顶部或底部^④。

橡胶压延机生产的胶片厚度范围通常为 0.1—1.5mm。但是这两个上、下限尺寸和所要求的胶片质量以及胶料特性的关系都十分密切^⑤。通常,生产厚度小于 0.1mm 的胶片所需负荷非常之大,以致普通橡胶压延机设计上都不允许承受,即使在胶料喂入辊隙之前把辊筒紧紧并到一起也不行^⑥。上限厚度根据豆状气泡而定。降低温度可减小气泡的尺寸和发生率,但将很难生产出不带枫叶纹的压延胶片。在此条件下,一种替代办法是将胶片趁热紧紧地卷入垫布中,最好用透气的织布垫布^⑦。这将使气泡爆破,过一段时间后胶料将填满形成的孔洞^⑧。因为气泡随着胶片厚度增大而增加,所以厚胶片通常用贴合法生产,即将两层或多层胶片贴合起来达到所需总厚度。无论用哪种方法贴合,材料中都有潜在的薄弱环节,有时发生脱层。胶片层与层之间滞留的空气也带来了问题。胶片贴合

可作为独立工序在包覆金属或包覆橡胶的辊筒之间进行,也可用附加的压延机辊筒,即包覆布或包覆橡胶的辊筒向胶片施加压力完成贴合。

注:①“happen”意为碰巧发生,偶然发生,此处可译为“偶尔”;“that”引出的是主语从句。

②“result in”为使役动词,“being a ‘flatting roll’”为其宾语补语。

③此句中“requiring reconditioning”为现在分词短语,作“calender”的定语。

④“keep”为使役动词,“in the up or down condition”为宾语补语。

⑤此句中“Both these dimensions”指的是上句中“0.1—1.5mm”这两个尺寸;“required”为过去分词作“the quality of sheeting”的后置定语。

⑥此句中“that”引出的是结果状语从句;主句中“to produce thicknesses less than 0.1mm”为“loads”的定语,如直译为“生产小于 0.1mm 的厚度”逻辑不通,转译为“生产厚度小于 0.1mm 的胶片”。

⑦“a textile liner”是“a liner”的同位语。

⑧“causes”为使役动词,“the blisters”和“the holes”为并列宾语,“to burst”和“to fill in with compound…”分别为它们的补语,“so formed”为过去分词作后置定语修饰“the holes”。

英译汉常见错误实例

The network structure changes from predominantly polysulphidic crosslinks with extensive main chain modification to mono sulphidic crosslinks with minimum main chain modification, as the sulphur level is reduced to zero.

误:硫黄用量被减少到零,硫化胶网络结构由广泛主链以多硫键为主向单硫键变化。

正:硫黄用量减到零的时候,硫化网络结