

## 英语学习

## 英语翻译技巧(32)

涂学忠

(化工部北京橡胶工业研究设计院 100039)

## 1.3.1 Tyre Sizing

The generally accepted system for indicating tyre dimensions is to quote the approximate cross-sectional width of the tyre, followed by the nominal diameter of the bead seat of the wheel to which the tyre must be fitted<sup>①</sup>. These dimensions are either expressed in inches or millimetres; dual imperial and metric unit markings are sometimes employed<sup>②</sup>.

The load-carrying capacity of a tyre is dependent on its internal volume and its inflation pressure. It therefore follows that, for a fixed section height-width ratio, the load-carrying capability will increase with increasing wheel diameters<sup>③</sup>. This arrangement has applied in the past for standard passenger car and truck tyre ranges, but recently, in the car group, there has been a trend towards designing tyres of common load-carrying capacity for all wheel diameters<sup>④</sup>. This means that the cross-sectional area reduces as the nominal bead diameter increases, i. e. the internal volume remains constant regardless of the nominal bead diameter. In this latter circumstance, the convention is to identify a tyre by a letter of the alphabet indicating the load-carrying capacity, followed by the percentage height-width ratio, and finally the wheel diameter (Table 2).

Although the basic principles of tyre

Table 2 EXAMPLES OF TYRE SIZING

5.20-13	5.20 inch section width, and nominal 13 inch wheel diameter
145-14	145 mm section width, and nominal 14 inch wheel diameter
H.70-15	H indicates the load-carrying capability, 70 the section height-width ratio, and 15 the nominal wheel diameter in inches

manufacture are similar for all tyre ranges, it will be appreciated that the method and plant used to produce a simple motorcycle tyre made up of approximately 10 components will differ radically from that necessary to handle an extra large earthmover tyre-embodying around 175 individual units<sup>⑤</sup>. A typical tyre of this type will contain as many as 40 layers of textile in the carcass plies and a composite tread weighing 600 kg giving an overall tyre weight of 1.25 Mg. Although semiautomatic building machinery is employed, much of the assembly is a skilled manual operation requiring more than 24 hours to complete, and followed by a vulcanising time of 8 hours. Other specialised ranges include tyres for aircraft and racing cars.

It is only possible in this chapter to cover one area in detail, and passenger car tyres have been selected for this purpose. Reference will be made where appropriate to special manufacturing procedures involved in other groups of tyres

生 词

sizing	规格划分
cross-sectional width	断面宽
nominal diameter	名义直径
imperial	英制
load-carrying capability	负荷能力
wheel	轮辋
truck tyre	载重车轮胎
passenger car tyre	轿车轮胎
motorcycle tyre	摩托车轮胎
earthmover tyre	工程机械轮胎
individual unit	独立部件
textile	织物
building machinery	成型机械
assembly	成型, 贴合
racing car	赛车

译 文

1. 3. 1 轮胎规格划分

在普遍采用的表示轮胎尺寸的体系中, 前面数字是轮胎的近似断面宽, 后面数字是与轮胎匹配的轮辋圈座的名义直径<sup>①</sup>。这些尺寸既有用英寸表示的, 也有用毫米表示的, 有时混合使用英制和公制标志<sup>②</sup>。

轮胎负荷能力取决于其内容积和充气压力。因此, 若轮胎高宽比不变, 则其负荷能力随轮辋直径增大而提高<sup>③</sup>。过去标准轿车和载重车轮胎一直都是这一格局, 但最近在轿车轮胎中, 已趋向于设计采用任意一种直径的轮辋其负荷能力都不变的轮胎<sup>④</sup>。这意味着当胎圈公称直径增大时, 轮胎截面积就减小, 即不管胎圈名义直径怎么变, 轮胎内容积都保持恒定。在第 2 种情况下, 习惯上用表示负荷的字母, 其次是高宽比的百分数, 最后还有轮辋直径作为辨认轮胎的标记(见表 2)。

尽管所有品种规格轮胎制造的基本原理都差不多, 但要知道, 生产由约 10 个部件组成的简单摩托车轮胎所用的方法和设备与制

造约包含 175 个独立部件的超大型工程轮胎是根本不同的<sup>⑤</sup>。这种超大规格典型轮胎有多至 40 层织物胎体帘布和重达 600kg 的复合胎面, 其总重达 1. 25t。虽然使用了半自动成型机, 但大量成型工作仍需要 24h 以上熟练工人的手工操作才能完成, 随后还要硫化 8h。其它特殊品种规格包括航空轮胎和赛车轮胎。本章只能详细地涉及其中一个方面, 因此就选择了轿车轮胎, 将在适当的地方介绍其它品种轮胎特殊的制造工艺。

表 2 轮胎规格划分的实例

5. 20-13	断面宽 5. 20 英寸, 轮辋直径 13 英寸
145-14	断面宽 145mm, 轮辋名义直径 14 英寸
H. 70-15	H 表示负荷能力, 70 表示断面高宽比, 15 表示轮辋名义直径

注: ①此句采用了意译法。

②“dual”译成“混合的”比“双重的”更为贴切。

③“it follows that”意为“因此”, “由此可知”; “for a fixed section height-width ratio”直译为“对于固定的高宽比来说”, 不如转译为“若轮胎高宽比不变”通顺。

④“...designing tyres of common load-carrying for all wheel diameters”也可译为“设计负荷相同、轮辋直径不同的轮胎”。

⑤此句是一个比较复杂的主从复合句。“Although”引出的是让步状态从句, 主句中的“it”是形式主语, 而“that”引出的从句是真正主语; “used to produce a simple motorcycle tyre”为过去分词短语作后置定语, 修饰“the method and plant”; “made up to approximately 10 components”为过去分词短语, 修饰“motorcycle tyre”; “necessary to handle...”为形容词短语作后置定语修饰它前面的“that”, 此处“that”为代词, 代“the method and plant”; “embodying around 175 individual units”为现在分词短语作后置定语, 修饰“earthmover tyre”。