|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 中国重型汽车集团有限公司  （济南商用车制造部  车身部  涂装现场分部驾驶室涂装线） | | | | | | 工时定额明细表 | | | | | | | | | | | | | | | | | 产品（零部件）图号 | | | | | | | | / | | | | | SC41860002 | | | | |
| 产品（零部件）名称 | | | | | | | | 驾驶室总成 | | | | | 共5 页 | | | | 第1 页 |
| 总工时 | | | 283.19 | | | | 生产线节拍 | | | | | | 5.33 | | | | | | 生产线平衡率 | | | | | | | | | | | 77.2% | | | | | | | | | | |
| 工序号 | | | 工序名称 | | | | 设备型号、名称 | | | | | | | | 设备  数量 | | 定员 | | 辅助时间  min | | | 基本时间  min | | | 工序工时  min | | | | | | | 工序节拍  min/件 | | | | | 备注 | | | |
| TZ020 | | | 擦净 | | | | 蒸汽除油设备 | | | | | | | | 2 | | 2 | | 2 | | | 8 | | | 10 | | | | | | | 5 | | | | |  | | | |
| TZ030 | | | 上件 | | | | 吊笼 | | | | | | | | 1 | | 3 | | 1.5 | | | 12 | | | 13.5 | | | | | | | 4.5 | | | | |  | | | |
| TZ210 | | | 下件 | | | | 吊笼、滑橇输送系统 | | | | | | | | 2 | | 3 | | 1.5 | | | 11 | | | 12.5 | | | | | | | 4.17 | | | | |  | | | |
| TZ215 | | | 加料 | | | | 加料设备 | | | | | | | | 1 | | 1 | | 0.5 | | | 4.5 | | | 5 | | | | | | | 5 | | | | |  | | | |
| TZ216 | | | 电泳整线操作 | | | | 电泳线、纯水系统、锅炉 | | | | | | | | 3 | | 1 | | 3 | | | 5 | | | 8 | | | | | | | 8 | | | | |  | | | |
| TZ217 | | | 化验 | | | | 化验室 | | | | | | | | 1 | | 1 | | 1.33 | | | 4 | | | 5.33 | | | | | | | 5.33 | | | | |  | | | |
| TZ45 | | | 转线 | | | | 滑橇输送系统 | | | | | | | | 1 | | 1 | | 1.33 | | | 4 | | | 5.33 | | | | | | | 5.33 | | | | |  | | | |
| TZ250 | | | 电泳质量检查 | | | | 滑橇输送系统、检测仪器 | | | | | | | | 2 | | 1 | | 1.5 | | | 3.83 | | | 5.33 | | | | | | | 5.33 | | | | |  | | | |
| TZ260 | | | 刮腻子 | | | | 腻子刮板 | | | | | | | | 1 | | 1 | | 1 | | | 4.33 | | | 5.33 | | | | | | | 5.33 | | | | | 外包 | | | |
| TZ270 | | | 贴粘结点及车型识别 | | | | 车型识别系统、滑橇输送系统 | | | | | | | | 2 | | 1 | | 1 | | | 4.33 | | | 5.33 | | | | | | | 5.33 | | | | |  | | | |
| TZ280-1 | | 电泳及腻子打磨 | | | | | 打磨机、吹尘枪 | | | | | | | | 2 | | 4 | | 5 | | | 16.32 | | | 21.32 | | | | | | | 5.33 | | | | | 外包 | | | |
| TZ280-2 | | 吹尘及擦净 | | | | | 吹尘枪 | | | | | | | | 1 | | 1 | | 0.5 | | | 4.5 | | | 5 | | | | | | | 5 | | | | | 外包 | | | |
| TZ290 | | 附件涂胶 | | | | | 集中供胶系统、胶枪 | | | | | | | | 2 | | 2 | | 1 | | | 9 | | | 10 | | | | | | | 5 | | | | |  | | | |
| TZ300-1 | | 涂焊缝密封胶1 | | | | | 集中供胶系统、胶枪 | | | | | | | | 2 | | 2 | | 1 | | | 9.5 | | | 10.5 | | | | | | | 5.25 | | | | | 外包 | | | |
| 中国重型汽车集团有限公司  （济南商用车制造部  车身部  涂装现场分部驾驶室涂装线） | | | | | | | 工时定额明细表 | | | | | | | | | | | | | | 产品（零部件）图号 | | | | | | / | | | | | | | SC41860002 | | | | | | |
| 产品（零部件）名称 | | | | | | 驾驶室总成 | | | | | | | 共5 页 | | | | | 第2 页 | |
| 总工时 | | 283.19 | | | | | 生产线节拍 | | | 5.33 | | | | | | | | | 生产线平衡率 | | | | | | | | | 77.2% | | | | | | | | | | | | |
| 工序号 | | 工序名称 | | | | | 设备型号、名称 | | | | | | | | 设备  数量 | | 定员 | | 辅助时间  min | | | 基本时间  min | | | 工序工时  min | | | | | | | 工序节拍  min/件 | | | | | 备注 | | | |
| TZ300-2 | | 涂焊缝密封胶2 | | | | | 集中供胶系统、胶枪 | | | | | | | | 2 | | 2 | | 2 | | | 8.16 | | | 10.16 | | | | | | | 5.08 | | | | | 外包 | | | |
| TZ300-3 | | 涂焊缝密封胶3 | | | | | 集中供胶系统、胶枪 | | | | | | | | 2 | | 3 | | 3 | | | 12.6 | | | 15.60 | | | | | | | 5.20 | | | | |  | | | |
| TZ300-4 | | 涂焊缝密封胶4 | | | | | 集中供胶系统、胶枪 | | | | | | | | 2 | | 2 | | 2 | | | 8.2 | | | 10.20 | | | | | | | 5.10 | | | | |  | | | |
| TZ300-5 | | 涂焊缝密封胶5 | | | | | 集中供胶系统、胶枪 | | | | | | | | 2 | | 4 | | 4 | | | 16 | | | 20.00 | | | | | | | 5.00 | | | | |  | | | |
| TZ305 | | 电泳金属附件转运（辅助） | | | | | 滑橇输送系统 | | | | | | | | 1 | | 1 | | 0 | | | 4.55 | | | 4.55 | | | | | | | 4.55 | | | | |  | | | |
| TZ310 | | 铺阻尼胶板 | | | | | 滑橇输送系统 | | | | | | | | 1 | | 2 | | 2 | | | 6.96 | | | 8.96 | | | | | | | 4.48 | | | | | 外包 | | | |
| TZ315 | | 质量门 | | | | | 滑橇输送系统 | | | | | | | | 1 | | 2 | | 2 | | | 8 | | | 10 | | | | | | | 5 | | | | |  | | | |
| TZ390 | | | 面漆前擦净 | | | | 滑橇输送系统、升降机、擦净室 | | | | | | | | 3 | | 3 | | 1.5 | | | 14.49 | | | 15.99 | | | | | | | 5.33 | | | | | 外包 | | | |
| TZ395 | | | 喷点补电泳 | | | | 喷漆室、静电喷枪、供漆系统、送排风系统 | | | | | | | | 4 | | 1 | | 0.6 | | | 4.53 | | | 5.13 | | | | | | | 5.13 | | | | | 外包 | | | |
| TZ410 | | | 人工内喷色漆 | | | | 喷漆室、静电喷枪、供漆系统、送排风系统 | | | | | | | | 4 | | 2 | | 1.5 | | | 9.1 | | | 10.6 | | | | | | | 5.3 | | | | | 外包 | | | |
| 中国重型汽车集团有限公司  （济南商用车制造部  车身部  涂装现场分部驾驶室涂装线） | | | | | | | 工时定额明细表 | | | | | | | | | | | | | | | | 产品（零部件）图号 | | | | | | / | | | | | | SC41860002 | | | | | |
| 产品（零部件）名称 | | | | | | 驾驶室总成 | | | | | | 共5 页 | | | | | 第3 页 |
| 总工时 | | | 283.19 | | | | 生产线节拍 | | | | 5.33 | | | | | | | | 生产线平衡率 | | | | | | | | | | | 77.2% | | | | | | | | | | |
| 工序号 | | | 工序名称 | | | | 设备型号、名称 | | | | | | | | 设备  数量 | | 定员 | | 辅助时间  min | | | 基本时间  min | | | 工序工时  min | | | | | | | 工序节拍  min/件 | | | | | 备注 | | | |
| TZ340-2 | | | 喷中漆(机器人操控) | | | | 喷漆室、机器人喷涂系统、供漆系统、送排风系统 | | | | | | | | 4 | | 1 | | 0.5 | | | 4.83 | | | 5.33 | | | | | | | 5.33 | | | | |  | | | |
| TZ435 | | | 人工补喷清漆 | | | | 喷漆室、静电喷枪、供漆系统、送排风系统 | | | | | | | | 4 | | 2 | | 5 | | | 5.5 | | | 10.5 | | | | | | | 5.25 | | | | | 外包 | | | |
| TZ500 | | | 点修 | | | | 打磨机、吹尘枪、送排风系统 | | | | | | | | 4 | | 4 | | 8 | | | 13.32 | | | 21.32 | | | | | | | 5.33 | | | | | 外包 | | | |
| TZ420 | | | 喷金属闪光底漆（实色漆）（机器人操控） | | | | 喷漆室、机器人喷涂系统、供漆系统、送排风系统 | | | | | | | | 4 | | 1 | | 0.5 | | | 4.83 | | | 5.33 | | | | | | | 5.33 | | | | |  | | | |
| TZ430 | | | 喷罩光清漆(机器人操控) | | | | 喷漆室、机器人喷涂系统、供漆系统、送排风系统 | | | | | | | | 4 | | 1 | | 0.5 | | | 4.83 | | | 5.33 | | | | | | | 5.33 | | | | |  | | | |
| TZ470 | | | 质量门 | | | | 色差仪、桔皮仪、光泽仪、膜厚仪、漆膜划格仪 | | | | | | | | 5 | | 2 | | 1 | | | 9.66 | | | 10.66 | | | | | | | 5.33 | | | | |  | | | |
| TZ480 | | | 精修（面漆质量检查及颗粒抛光） | | | | 抛光机 | | | | | | | | 1 | | 2 | | 1 | | | 9.66 | | | 10.66 | | | | | | | 5.33 | | | | | 外包 | | | |
| 中国重型汽车集团有限公司  （济南商用车制造部  车身部  涂装现场分部驾驶室涂装线） | | | | | | | 工时定额明细表 | | | | | | | | | | | | | | | | 产品（零部件）图号 | | | | | | / | | | | | | SC41860002 | | | | | |
| 产品（零部件）名称 | | | | | | 驾驶室总成 | | | | | | 共5页 | | | | | 第4 页 |
| 总工时 | | | 283.19 | | | | 生产线节拍 | | | | 5.33 | | | | | | | | 生产线平衡率 | | | | | | | | | | | 77.2% | | | | | | | | | | |
| 工序号 | | | 工序名称 | | | | 设备型号、名称 | | | | | | | | 设备  数量 | | 定员 | | 辅助时间  min | | | 基本时间  min | | | 工序工时  min | | | | | | | 工序节拍  min/件 | | | | | 备注 | | | |
| TZ505 | | | 喷蜡 | | | | / | | | | | | | | / | | 2 | | 4 | | | 6.66 | | | 10.66 | | | | | | | 5.33 | | | | |  | | | |
| TZ510 | | | 检验 | | | | 点修室、滑橇输送系统 | | | | | | | | 2 | | 2 | | 2 | | | 8.5 | | | 10.5 | | | | | | | 5.25 | | | | |  | | | |
| TZ530 | | | 拆卸顶盖、保险杠、工具箱盖及前部模块 | | | | 电枪、滑橇输送系统、悬臂吊具 | | | | | | | | 3 | | 4 | | 7.68 | | | 11.2 | | | 18.88 | | | | | | | 4.72 | | | | |  | | | |
| TZ540 | | | 下线 | | | | 叉车、滑橇输送系统、EMS自行小车 | | | | | | | | 3 | | 2 | | 3.24 | | | 5.34 | | | 8.58 | | | | | | | 4.29 | | | | |  | | | |
| TZ550 | | | 面漆驾驶室转运（辅助） | | | | 叉车 | | | | | | | | 1 | | 1 | | 1.16 | | | 3.84 | | | 5 | | | | | | | 5.00 | | | | | 外包 | | | |
| TZ560 | | | 调漆过程 | | | | 输调漆系统、管中管温控系统、废溶剂回收系统 | | | | | | | | 3 | | 3 | | 3 | | | 12 | | | 15.00 | | | | | | | 5.00 | | | | |  | | | |
| TZ580 | | | 组合式空调处理机组 | | | | 组合式空调处理机组、纯水系统 | | | | | | | | 1 | | 3 | | 2.4 | | | 12.6 | | | 15.00 | | | | | | | 5.00 | | | | |  | | | |
| TZ590 | | | 废气处理设备操控维保 | | | | 排风系统、废气处理系统 | | | | | | | | 2 | | 1 | | 2.5 | | | 2.25 | | | 4.75 | | | | | | | 4.75 | | | | |  | | | |
| TZ600 | | | 总装上线前抛光服务（辅助） | | | | 抛光机 | | | | | | | | 1 | | 1 | | 1.0 | | | 3.5 | | | 4.50 | | | | | | | 4.50 | | | | | 外包 | | | |
| 中国重型汽车集团有限公司  （济南商用车制造部  车身部  涂装现场分部驾驶室涂装线） | | | | | | | 工时定额明细表 | | | | | | | | | | | | | | | | 产品（零部件）图号 | | | | | | / | | | | | | SC41860002 | | | | | |
| 产品（零部件）名称 | | | | | | 驾驶室总成 | | | | | | 共5页 | | | | | 第5页 |
| 总工时 | | | 283.19 | | | | 生产线节拍 | | | | 5.33 | | | | | | | | 生产线平衡率 | | | | | | | | | | | 77.2% | | | | | | | | | | |
| 工序号 | | | 工序名称 | | | | 设备型号、名称 | | | | | | | | 设备  数量 | | 定员 | | 辅助时间  min | | | 基本时间  min | | | 工序工时  min | | | | | | | 工序节拍  min/件 | | | | | 备注 | | | |
| TZ610 | | | 调试服务（辅助） | | | | 喷枪、抛光机、打磨机、点修室、烤灯 | | | | | | | | 4 | | 2 | | 3 | | | 7 | | | 10 | | | | | | | 5 | | | | | 外包 | | | |
| / | | | 生产组织 | | | | / | | | | | | | | / | | 1 | | / | | | / | | | / | | | | | | | / | | | | | 外包 | | | |
|  |  | | |  |  | | |  |  | | |  | |  | |  | |  | | 编制(日期) | | | | 审核(日期) | | 批准(日期) | | | | | | | 标准化(日期) | | | | | 会签(日期) | | | |
|  |  | | |  |  | | |  |  | | |  | |  | |  | |  | |  | | | |  | |  | | | | | | |  | | | | |  | | | |
| 标记 | 处数 | | | 更改文件 | 签字 | | | 日期 | 标记 | | | 处数 | | 更改文件 | | 签字 | | 日期 | |

工时定额明细表的填写规则。

|  |  |
| --- | --- |
| 空格号 | 填写内容 |
| （1） | 工序号。 |
| （2） | 工序名称。 |
| （3） | 设备型号名称。 |
| （4） | 设备数量，用阿拉伯数字1、2、3表示。 |
| （5） | 所需要的作业人数。 |
| （6） | 装卸工件、开停机床时间。 |
| （7） | 直接改变生产对象的尺寸、形状、相对位置以及表面状态、进退刀、测量工件（包括设备自动测量、人工在线测量）等工艺过程所消耗的时间。 |
| （8） | 是指工件在一台设备从上料加工/装配到完成下料时间。对于批量生产为辅助时间和基本时间之和。 |
| （9） | 是指流水线上某道工序相邻两件同样制品投入或出产的间隔时间。工序节拍的大小不仅与该工序的单件时间定额有关,还与同时执行该工序的设备或工作地的数目有关。对单台设备节拍=工序工时，对N台设备单件节拍=工序工时/N。 |
| （10） | 未包含，需要明确的其他内容 |
| （11） | 各工序的“工序节拍”之和 |
| （12） | 最长的“工序节拍” |
| （13） | 总工时/（生产线节拍×工序数量） |