



# White Paper 白皮书

## Introduction 介绍

本白皮书旨在全面介绍钢支撑、脚手架、铁模板等建筑施工中关键的设备。

This white paper aims to comprehensively introduce key equipment in construction such as steel supports, scaffolding, and iron formwork.

钢支撑是用于支撑混凝土模板和梁板等临时结构的重要构件，对于确保施工安全和质量具有至关重要的作用。

Steel supports are important components used to support temporary structures such as concrete formwork and beam slabs, and play a vital role in ensuring construction safety and quality.

## 钢支撑产品概述 Overview of steel prop products

钢支撑是一种用于支撑混凝土模板、梁板或其他结构的临时支撑系统，通常由钢材制成，具有调节高度和承受重量的能力。

Steel bracing is a temporary bracing system used to support concrete forms, beam slabs or other structures. It is usually made of steel and has the ability to adjust height and bear weight.

## 主要特点 Main features

**高强度和稳定性:** 采用高强度钢材制成，具有出色的承载能力和稳定性，确保施工安全。

**可调节性:** 支撑高度可调整，适应不同高度和形状的施工结构，提高施工灵活性。

**耐用性:** 具有长期使用寿命，抗锈蚀和耐磨性强，适应不同的施工环境和条件。

**High strength and stability:** Made of high-strength steel, it has excellent load-bearing capacity and stability to ensure construction safety.

**Adjustability:** The support height is adjustable to adapt to construction structures of different heights and shapes, improving construction flexibility.

**Durability:** It has a long service life, strong resistance to rust and wear, and can adapt to different construction environments and conditions.



## 主要组成部分Main components

立柱：支撑系统的垂直支柱，负责承受垂直载荷。

横梁：连接立柱的横向支撑，承受横向荷载和提供水平支撑。

底座：支撑系统底部的稳定支撑，分散载荷并保持稳定。

调节螺杆：用于调整支撑高度的螺旋式调节装置。

Post: The vertical pillar that supports the system and is responsible for bearing vertical loads.

Beam: A lateral support connecting columns to bear lateral loads and provide horizontal support.

Base Plate: A stable support at the bottom of the support system, which distributes the load and maintains stability.

Adjustable Screw Jack: A screw-type adjustment device used to adjust the support height.

## 应用场景Application scenarios

钢支撑广泛应用于建筑施工的各个阶段和场景：

Steel supports are widely used in various stages and scenarios of building construction:

混凝土模板支撑：用于支撑混凝土模板，确保模板在浇筑过程中的稳定性和平整度。

梁板支撑：支撑和加固梁板以承受混凝土浇筑和施工负荷。

隧道施工：用于隧道内部支撑和临时结构的搭建。

Concrete formwork support: used to support the concrete formwork to ensure the stability and flatness of the formwork during the pouring process.

Beam and Slab Bracing: Support and strengthen beams and slabs to withstand concrete pouring and construction loads.

Tunnel construction: used for the construction of internal supports and temporary structures in tunnels.

## 产品优势与价值Product advantages and value

安全性：提供稳固的支撑结构，确保施工过程中的安全。

效率性：提高施工效率，减少施工时间和人力成本。

可重复使用：具有长期使用寿命，可多次重复利用，降低施工成本。

Safety: Provide a stable support structure to ensure safety during construction.

Efficiency: Improve construction efficiency and reduce construction time and labor costs.

Reusable: It has a long service life and can be reused many times to reduce construction costs.

钢支撑作为建筑施工不可或缺的重要设备，为工程施工提供了安全、稳定和高效的支撑系统，对于确保工程质量和进度具有重要的经济和社会价值。

As an indispensable and important equipment for building construction, steel supports provide a safe, stable and efficient support system for project construction, and have important economic and social value for ensuring project quality and progress.



## 技术参数 Technical parameters

钢支撑的技术参数应符合相关的国家和行业标准，包括但不限于承载能力、高度范围、材料规格等。

The technical parameters of steel supports should comply with relevant national and industry standards, including but not limited to load-bearing capacity, height range, material specifications, etc.

## 安全标准 Safety standards

钢支撑的设计、制造和使用应符合建筑施工安全规范和标准，确保施工现场的安全性和稳定性。

The design, manufacture and use of steel supports should comply with construction safety codes and standards to ensure the safety and stability of the construction site.



## 脚手架产品概述 Overview of steel prop products 脚手架产品概述

### Product Definition 产品定义

脚手架是一种临时性支撑结构，通常由钢管、铝合金或木材构成，用于支撑施工人员、材料和设备，提供工作平台和通道。

Scaffolding is a temporary support structure typically made of steel tubes, aluminum alloy, or wood, used to support construction workers, materials, and equipment, providing working platforms and access.

### Key Features 主要特点

**Safety 安全性:** Designed to ensure safety for workers and materials during construction activities at heights.

**Flexibility 灵活性:** Adjustable and adaptable to different heights and configurations to suit various construction needs.

**Durability 耐用性:** Durable materials and construction to withstand harsh construction environments.

### Types of Scaffolding 脚手架类型

脚手架可以分为多种类型，常见的包括：

Scaffolding can be divided into various types, commonly including:

管杆脚手架: 使用钢管和连接器组装，灵活适用于不同形状和高度的施工结构。

Ringlock Scaffolding : Pipe scaffold: assembled using steel pipes and connectors, flexible and suitable for construction structures of different shapes and heights.



框架脚手架: 框架式结构, 便于快速搭建和拆卸, 适用于室内和室外施工。

Frame Scaffolding : Framework structure, easy to quickly build and disassemble, suitable for indoor and outdoor construction.

移动脚手架: 带有轮子和可移动部件, 便于移动和调整位置, 适用于大面积施工。

Mobile Scaffolding : Equipped with wheels and movable components, easy to move and adjust position, suitable for large-scale construction.

## **Applications 应用场景**

脚手架广泛应用于建筑施工的各个阶段和场景:

Scaffolding is widely used in various stages and scenarios of construction:

外墙施工: 提供施工人员安全的高空作业平台, 便于外墙施工和装饰。

Exterior Wall Construction :

室内装修和维护: 提供稳定的工作平台和通道, 方便室内装修和维护工作。

Interior Renovation and Maintenance :

桥梁和基础设施施工: 支持桥梁和大型结构施工, 提供安全的施工通道和平台。

Bridge and Infrastructure Construction :

## **Advantages and Value 优势与价值**

安全性: 为高空施工人员提供安全的工作平台和通道。

Safety: Provides safe working platforms and access for construction workers at heights.

效率性: 通过在施工活动中方便出入和移动, 提高施工效率。

Efficiency : Improves construction efficiency by facilitating access and movement during construction activities.

多功能性: 适用于各种施工需求和环境

Versatility : Versatile and adaptable to various construction needs and environments.

## **Value 价值**

脚手架作为建筑施工的关键设备, 为高空作业和施工提供必要的支持和保障, 对于提高施工效率和质量具有重要的经济和社会价值。

Scaffolding, as a key equipment in construction, provides necessary support and guarantee for high-altitude operations and construction, and has important economic and social value in improving construction efficiency and quality.



## Safety Standards 安全标准

脚手架的设计、制造和使用应符合建筑施工安全规范和标准，确保施工现场的安全性和稳定性。

The design, manufacturing, and use of scaffolding should comply with construction safety regulations and standards to ensure the safety and stability of the construction site.



## Overview of steel formwork products 钢模板产品概述

钢模板是一种用于混凝土施工中制作结构体的模板系统，具有高强度、耐用性和重复使用性等优点，对于提高施工质量和效率具有重要作用。

Steel formwork is a system used to create structural elements during concrete construction, known for its high strength, durability, and reusability, contributing significantly to improved construction quality and efficiency.

## Key Features 主要特点

钢模板的主要特点包括：

The main characteristics of steel formwork include:

高强度和耐用性：采用优质钢材制成，具有出色的承载能力和抗变形性，适应各种施工条件。

High strength and durability: Made of high-quality steel, it has excellent load-bearing capacity and deformation resistance, suitable for various construction conditions.

重复使用：相比于传统木质模板，钢模板具有较长的使用寿命，可多次重复利用，降低施工成本。

Reuse: Compared to traditional wooden templates, steel templates have a longer service life and can be reused multiple times, reducing construction costs.

精确度和稳定性：提供准确的模板尺寸和平整度，确保混凝土结构的质量和准确性。

Accuracy and stability: Provide accurate template dimensions and flatness to ensure the quality and accuracy of concrete structures.

快速拼装：模板系统结构简单，易于拼装和拆卸，提高施工效率。

Quick assembly: The template system has a simple structure, is easy to assemble and disassemble, and improves construction efficiency.

## Types of Steel Formwork 钢模板的类型

钢模板可分为不同类型，常见的包括：

平板式钢模板：表面平整的钢板，适用于平整表面的混凝土结构施工。

Flat steel formwork: A flat steel plate suitable for the construction of concrete structures with a flat surface.

梁板式钢模板：适用于梁和板的组合结构，可快速搭建和调整。

Beam and slab steel formwork: suitable for composite structures of beams and slabs, and can be quickly constructed and adjusted.



圆柱式钢模板：用于圆柱体或曲线结构的模板，具有弯曲性和灵活性。

Cylindrical steel template: A template used for cylindrical or curved structures, with bending and flexibility.

### **Applications 应用场景**

钢模板广泛应用于以下建筑和工程项目中：

Steel formwork is widely used in the following construction and engineering projects:

住宅和商业建筑：用于楼板、梁和柱的混凝土施工，提供高质量的表面和结构。

Residential and commercial buildings: used for concrete construction of floors, beams, and columns, providing high-quality surfaces and structures.

桥梁和隧道工程：支撑桥梁和隧道结构的混凝土浇筑，确保结构稳固和耐久。

Bridge and tunnel engineering: Concrete pouring to support bridge and tunnel structures, ensuring structural stability and durability.

水利和水电工程：应用于水坝、水塔和水电站等混凝土结构的施工。

Water conservancy and hydropower engineering: applied to the construction of concrete structures such as dams, towers, and hydropower stations.

### **Advantages and Benefits 优势与益处**

提高施工效率：简化施工流程，减少调整和修整时间，缩短工期。

Improve construction efficiency: Simplify the construction process, reduce adjustment and repair time, and shorten the construction period.

保证施工质量：提供准确的模板尺寸和平整度，确保混凝土结构的质量和准确性。

Ensure construction quality: Provide accurate template dimensions and flatness to ensure the quality and accuracy of concrete structures.

降低施工成本：长期使用寿命和可重复利用性，降低了模板的采购和维护成本。

Reducing construction costs: Long service life and reusability reduce the procurement and maintenance costs of templates.