



MetPlusTM

From Hillfoot Steel

**Our proven, integrated material design
& supply methodology**

HILLFOOT 
Engineering Steel

Let's de-risk your projects with an early intervention process that empowers every key decision.

In many engineering programmes, raw material decisions are made too late in the design process. By the time specifications are reviewed in detail, projects are often already committed to material choices that are difficult to source, inefficient to manufacture, or commercially unsustainable.

At that point the consequences can be significant: redesign work, extended lead times, unexpected cost increases and long-term supply risks that threaten programme timelines. MetPlus™ was developed to address this issue.

MetPlus™ is our structured methodology for engaging earlier in the design and engineering process, bringing together metallurgical expertise, manufacturing knowledge and supply chain insight to ensure the right material, production route and supply strategy are established from the outset.

By resolving these questions early, our clients can avoid unnecessary cost and materials waste, reduce supply risk and build a more secure foundation for long-term production.

The challenge MetPlus™ solves

Overview

MetPlus™ was developed to address a common challenge in engineering and manufacturing programmes: raw material decisions are often made late in the design process, when it becomes difficult, or costly, to correct mistakes.

At this stage clients frequently discover that:

- the specified grade is obsolete or unavailable
- mill minimum order quantities are unrealistic
- required mechanical properties cannot be achieved
- lead times exceed the project timeline
- technical data is incomplete or inconsistent

These issues can lead to delays, redesign work, cost escalation and supply risk. MetPlus™ addresses this challenge by aligning design intent, material selection and supply chain capability from the outset.

By integrating metallurgical expertise, manufacturing insight and supply chain planning, Hillfoot develops material solutions that are:

- technically optimised
- commercially viable
- reliably supplied throughout the lifecycle of the project

Where MetPlus™ creates value

Initial design & prototyping

Ensures optimal selection of steel grades, production routes, heat treatment and testing regimes, preventing sourcing challenges and technical compromises later in the project.

Design for manufacture

Aligns material specifications with manufacturing realities to improve machinability, production efficiency and product quality.

Raw material cost optimisation

Identifies alternative material solutions or production routes that reduce cost without compromising performance.

In-service performance

Enhances fatigue resistance, structural performance and long-term reliability while reducing the risk of premature component failure.

Repair and aftermarket support

Ensures smaller batch availability of materials to support maintenance and repair strategies throughout the product lifecycle.

Obsolescence management

Identifies materials that can be reliably reproduced in the future or develops compliant alternatives where required.

Responsible and sustainable sourcing

Supports ESG objectives through transparent supply chains and responsible mill selection.

MetPlus™ supports projects across the entire engineering lifecycle.

Real world MetPlus™ applications

Front-end design application

MetPlus™ delivers the greatest value when applied at the earliest stage of a project, when material selection and supply chain planning can be fully integrated into the engineering process.

Retrospective application

MetPlus™ can also be applied retrospectively to:

- investigate premature component failure
- optimise existing material specifications
- improve supply reliability
- reduce cost within established production programmes

MetPlus™ methodology in action

Materials and Applications

Metal Types

- Carbon steels
- Engineering alloys
- Stainless steels
- Remelted alloys
- Non-ferrous alloys

Product Forms

- Hot rolled long products
- Forged long products
- Cold drawn products
- Rolled rings
- Open and closed die forgings

Processing Capabilities

- Heat treatment
- Mechanical testing
- First and second stage machining

The three MetPlus™ pillars

Metallurgical & Product Expertise

Hillfoot works with customers to design or optimise raw material solutions tailored to specific engineering applications.

This may include:

- bespoke material design from first principles
- modification of chemical composition
- optimisation of fatigue performance
- machinability improvements
- manufacturing route redesign
- melting method selection

Typical outcomes include improved component performance, reduced machining complexity and lower material waste.

Global manufacturing knowledge

Steel producers around the world manufacture materials in different ways and to different capabilities.

Hillfoot's understanding of global steel manufacturing allows technical requirements to be matched with the most appropriate production routes and specialist producers.

This includes:

Raw Material Availability

Access to globally positioned steel mills ensuring multiple supply options and production continuity.

Manufacturing Expertise

Identification of producers capable of meeting demanding metallurgical requirements.

Reliability & Repeatability

Selection of trusted suppliers capable of delivering consistent material quality over the long term.

ESG Alignment

Mill selection aligned with environmental and governance requirements including CO₂ reporting and responsible sourcing standards.

Service and supply integration

Hillfoot's high-service supply model ensures materials remain reliably available throughout the lifecycle of a project.

Key elements include:

- long-term strategic supplier partnerships
- dedicated stockholding where required
- flexible supply arrangements
- rapid-response technical support

Hillfoot's operational framework is supported by:

- ISO9001
- ISO14001
- ISO45001
- robust cybersecurity standards

Commercial engagement with your business

Hillfoot works with customers to design or optimise MetPlus™ which can be delivered through several engagement structures depending on project requirements.

Advisory Support

Access to metallurgical and supply chain expertise for ongoing technical consultation.

Project-Specific Consultation

Application of MetPlus to a defined product, component or engineering programme.

Integrated Design & Supply

Where Hillfoot supplies the raw material, MetPlus can be fully integrated within a long-term supply agreement.

Save time, control cost and optimise manufacturing outcomes by selecting the right materials at source.

MetPlus™ ensures the right material, from the right source, through the right manufacturing route - from the very start of a project.

