




ALPINE METAL TECH
A COMPANY OF MONTANA TECH COMPONENTS AG

AMTident

Customized product identification





AMTident is the enabler for gapless product tracking in highly advanced production systems.

PRODUCT IDENTIFICATION

AMTident

With AMTident ALPINE METAL TECH provides a system for product identification whose objective is to ensure production efficiency and to close data gaps in highly automated production processes.

Specific process points are chosen in close coordination with our customers where a high potential of unnecessary material handling and waste of energy is identified or process checkpoints for

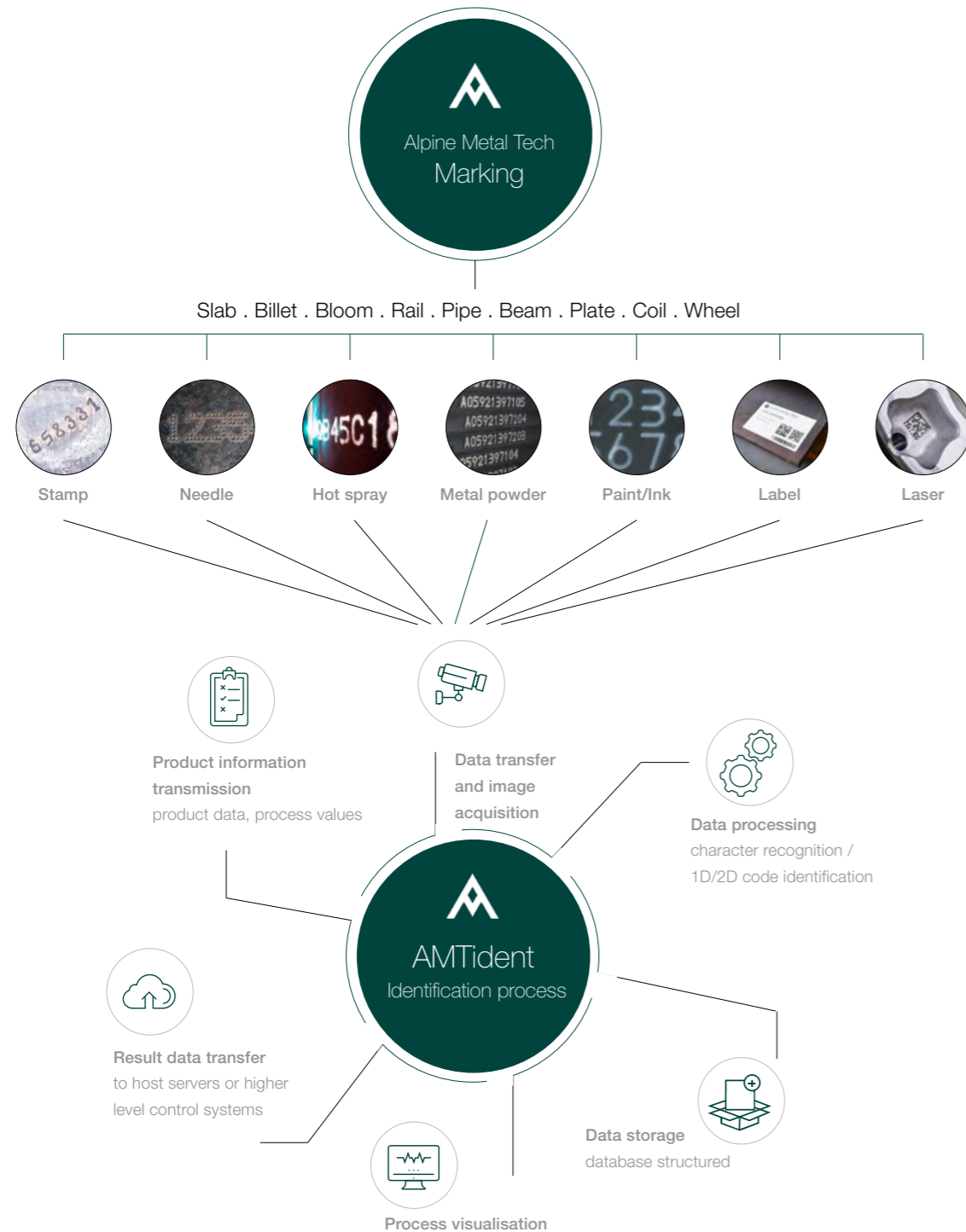
backtracking purposes are required. Alpine Metal Tech uses its long time experience in product marking and image processing for product identification in terms of product ID reading using diverse camera technologies and advanced processing algorithms. The symbiosis of marking and identification equipment out of one hand proves great benefits for product identification and verification throughout our customer's shop floor.

YOUR ADVANTAGES

- » Verification/identification
Marking performance assessment to stabilize marking results at highest level
- » Data Sovereignty
Closed data gaps - product tracking over the whole production process possible
- » Live process visualisation
Current production visualisation to assist operators
- » Data driven analysis (KPIs)
Performance figures based on data driven analysis to identify potentials for continuous process improvement
- » Self-monitoring
Parameter surveillance signals deviations at early times
- » Cost and Environmental Savings
No unnecessary material handling and process steps - optimized logistics

MARKING - IDENTIFICATION SYMBIOSIS

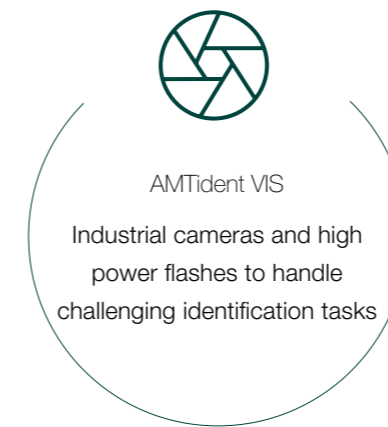
Alpine Metal Tech provides advanced technology for unmistakable product identification. The symbiosis of Alpine Metal Tech marking machinery and AMTident shows unique advantages for our customers as the entire key process for product tracing along the production process (marking, verification, identification) is offered from a single source.



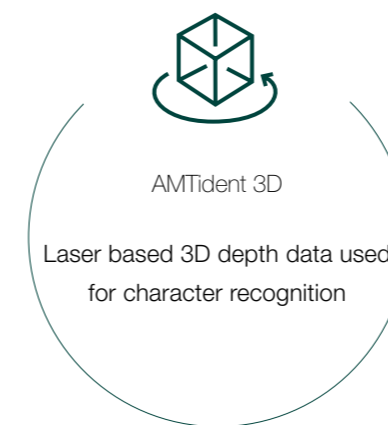
AMTident

AMTident is developed to meet the demand of reading product ID's independent from product, marking technology and environmental conditions. In order to provide highest identification rates, AMTident utilises a wide spectrum of industrial vision technology like CCD and infrared cameras, laser scanners and corresponding illumination equipment to ensure a stable lighting and acquisition scenery.

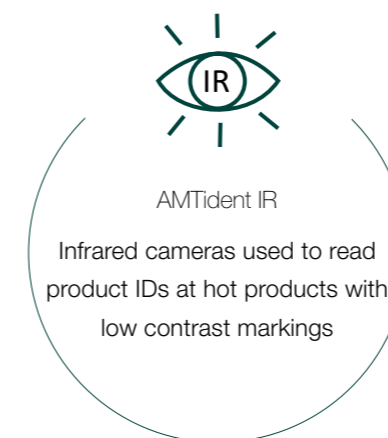
To achieve unequaled identification rates throughout a complex product range, diverse harsh environmental conditions and low contrast surfaces, AMTident can be delivered in three main versions, which are customized to appropriate site conditions:



Combining camera and high power flash equipment shows the greatest flexibility for applications throughout the whole production process. Stable and controlled acquisition conditions are generated. Advanced image processing algorithms are applied to handle the complexity of challenging identification tasks to ensure high level performance rates.



The AMTident 3D system generates surface data which is used for character recognition and therefore for product identification. A laser profile scanner is moved along the product to generate a 3D representation of its surface. This enables the system to segment characters on very challenging surfaces (painted, oily, reflective). In addition the 3D depth data can be used for product quality assessment and condition monitoring. Mainly used for punch or stamp markings.



A challenging task is to recognize characters on hot low contrast surfaces. Looking at those products using "infrared eyes" already proved great performance where other technologies failed. Processing infrared images enables AMTident to see features which are hidden to human eyes and cameras that operate in the visible band spectrum.

TECHNICAL DATA

AMTident consists of two core elements, the sensor technology and the processing software. Alpine Metal Tech commits to full extend software concepts to provide data sovereignty for our customers from acquired data referenced to product information, through process visualisation to analysis dashboards.

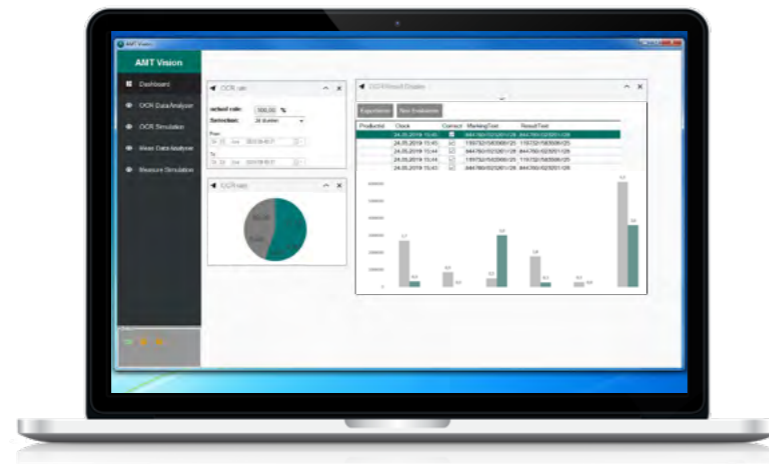


AMTident – product dashboard

To close the data gap in highly automated production systems, AMTident follows a strict and modern database design to store raw and result data.

The easy to use interface provides live information and process visualisation to assist operators and line managers. Images and corresponding product data are stored for backtracking purposes and can easily be accessed for direct production feedback and analysis.

The data driven software approach of AMTident allows to generate production performance figures (KPIs) to identify continuous process improvement potentials. Due to numerous filters analyzation can easily be customized and data exported accordingly.

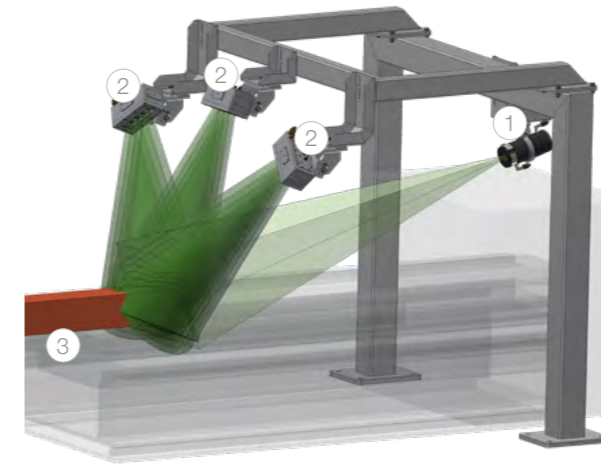


AMTident – analyser dashboard

Interfaces to field level devices or to higher level control systems are customized according to project requirements. Common communication standards are used to receive and send data packages such as TCP/IP, Ethernet/IP, Profibus or Profinet protocols.

AMTident is a windows-based software which receives images and data from selected sensors and cameras to recognize and read 1D/2D codes, letters, numbers, and special characters.

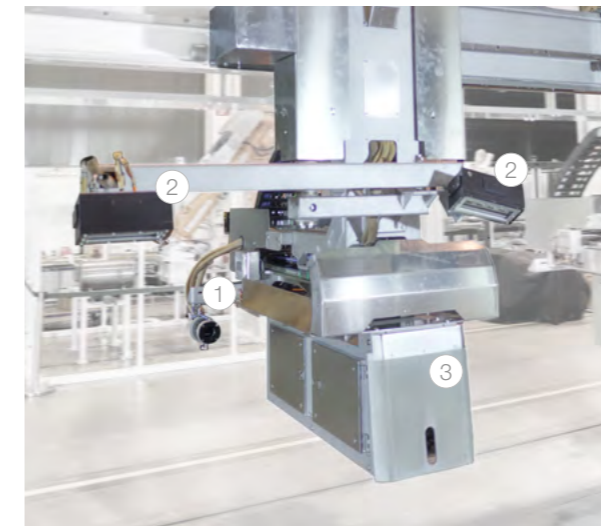
Alpine Metal Tech provides AMTident as standalone version for product identification and backtracking purposes or as version, installed on board of Alpine Metal Tech marking machines for fast marking process feedback and marking verification.



Stand alone

The AMTident standalone version serves as process checkpoints in highly advanced production systems. The system design is customized to site and environmental conditions. Scope is to provide secured product identification and therefore a reliable data basis for product tracking and tracing purposes.

- ① Camera with VIS, 3D or IR technology
- ② Illumination equipment
- ③ Customer specific product



On board

Alpine Metal Tech marking equipment both, existing and new installations, can easily be extended with AMTident. Two key technologies of a production system are combined to guarantee verified marking performance at highest level. Decreasing marking quality due to considerable wear of stamps or upcoming maintenance demand is immediately reported.

- ① Camera with VIS, 3D or IR technology
- ② Illumination equipment
- ③ Revolving head marking machine bridge type

Types	AMTident VIS, 3D, IR
Products	slab, bloom, billet, coil, plate, tube, rail, wheel
Marking technology	stamped, needled, hot spray, metal powder, paint/ink, labels, laser
Marking data	1D/2D codes, characters, numbers, special characters, logos
Software	Windows 10 incl. future updates
Data transfer protocol	TCP/IP, Profinet, Profibus, Ethernet/IP, OPC/UA
Temperature range	ambient to 1100° C
Options	water or air cooled protection housings, air curtain to avoid dust on sight glasses

Alpine Metal Tech GmbH
Buchbergstraße 11
4844 Regau, Austria
Tel.: +43 7672 78134-0
E-mail: office@alpinemetaltech.com
Web: www.alpinemetaltech.com

