

Recent Applications of Optical Measurement Techniques to Steel Industry Processes

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Synopsis :

On-line measurement of quality and dimensions of products and the condition of processes has recently become very important to keep stable production of high quality and homogeneous products. This tendency is also applicable to the steel industry. To satisfy these strong needs, optical measurement technologies and instruments have been developed because of their advantages such as non-contact, high-response and high-sensitive measurements. Recent advances of hard-ware technologies have also-contributed to development of new instruments. Recent examples are dimensional measurement using optical cross sectional method and surface property measurement of steel sheets or rolls for which surface reflective characteristics and image information are utilized. In order to develop to develop these kinds of instruments, durability against adverse environment, countermeasures to realize high response, resolution and precision measurement are taken into consideration. In this paper, the actual state of optical measurement technologies and also future trends are described.

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最近の光応用計測技術の鉄鋼プロセスへの適用*

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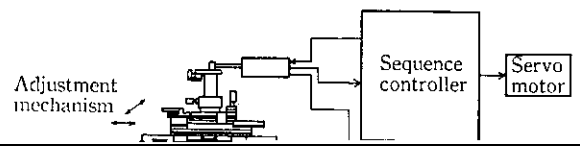
要旨

らず広く生産現場での実用化へ移行する応用例も増加することが期
待される。また、非接触・直感型・高速高精度への期待は、

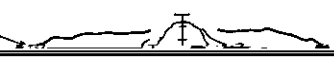
測の手段として、より効果や機能を増すことができる。この中で、
特に、非接触型については、中核の日本企業が国際的に活躍し、

ルド材の選定に配慮した小型で堅牢な構造とする。点検、保守、部品交換等を容易とするなどメンテナンス性を十分に考慮する。

(2) 対象物の変化に応じて補正ロジックを組み込む。また、自動



Shell



反基準側に 41 個の角穴が配置され、それぞれの寸法はマイクロ

メータで測定される。角穴の配置は、図 1 に示すようにである。

1. 说明该图的含义，并简述其特点。