



RFID

Radio-Frequency IDentification
in the Steel Industry

Radiofrequency identification (RFID) is a form of wireless communication that uses radio waves to identify and track objects.

ENDPOINTS

Reader powers tags enable the tag to receive and send information back to reader.

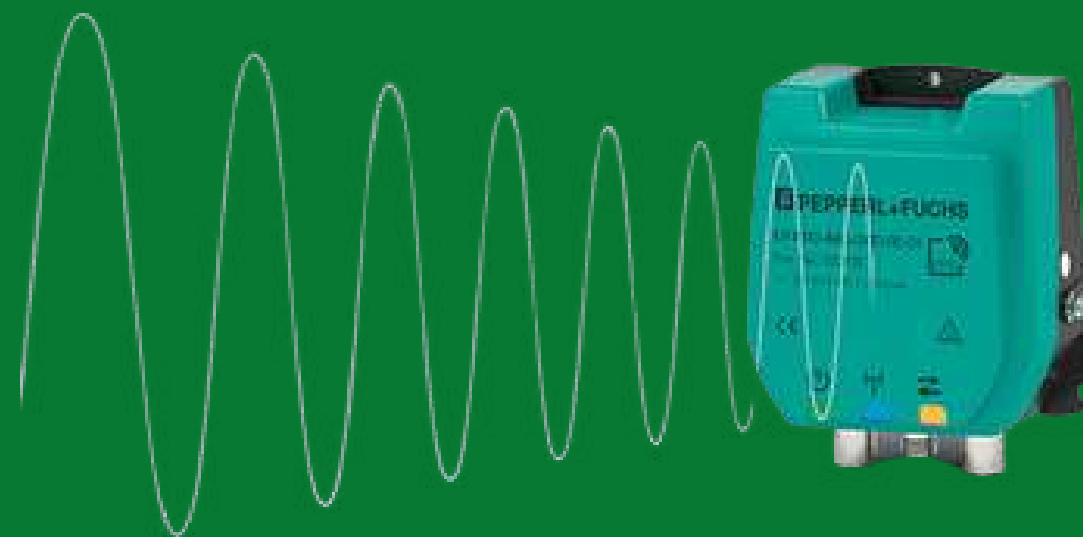
RFID Tag (Transponders)

Attached to an object to carry information.



RFID Reader (Antenna)

Establish communication through an antenna.



Management System (Database)

Allow storage and evaluation of the tag.



Solutions | Hook Recognition



RFID HOOK RECOGNITION

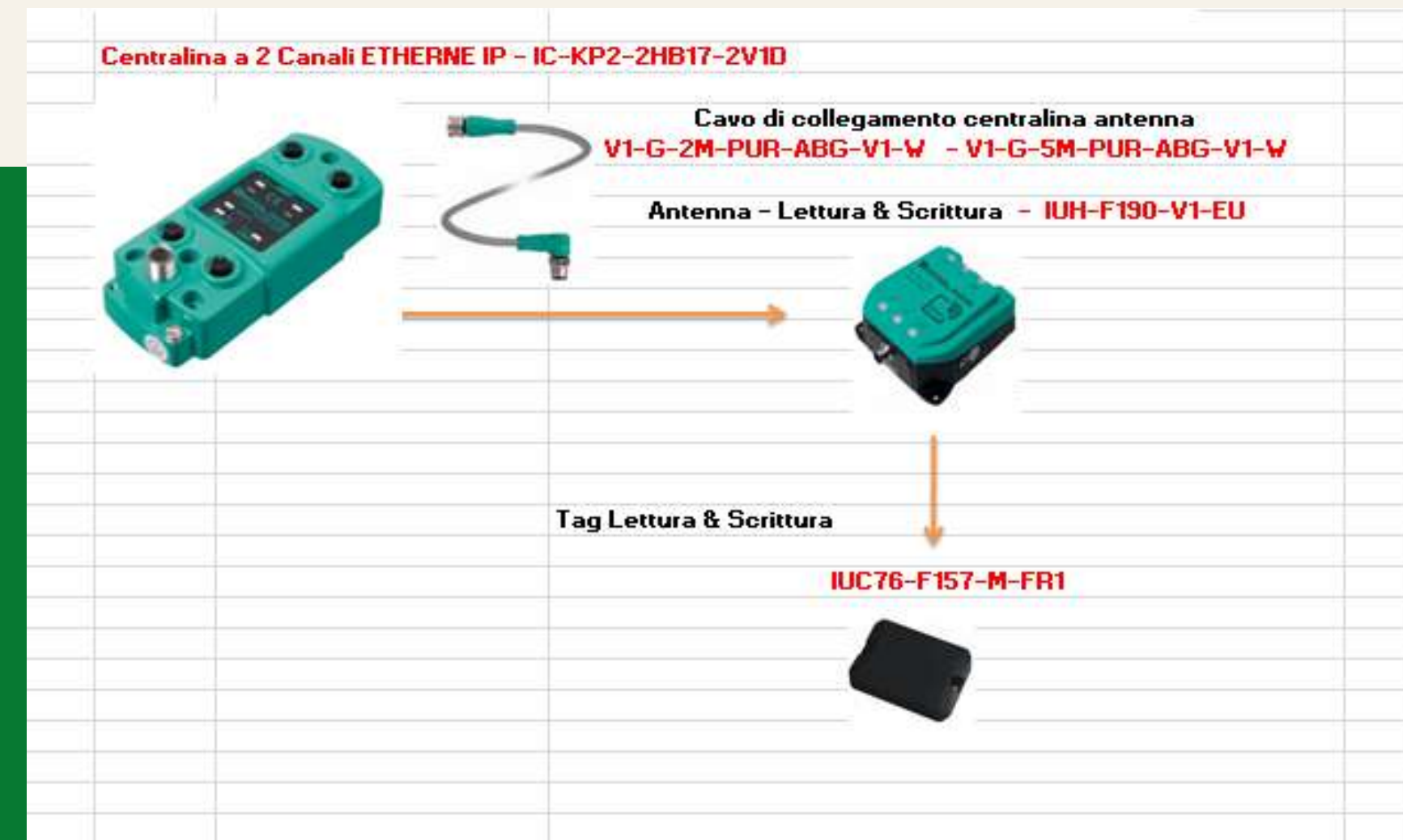
To detect the current position and the trajectory of steel coils in a plant, hooks are tracked by an inspection system based on PLC. The inspection system detects transit hooks by monitoring a physical contact between steel bars on a hook and the inspection sensors.

RFID HOOK RECOGNITION

RFID read/write heads are available as near-field and far-field components.

The management of the ID to be written, the writing and reading commands are all carried out through PLC blocks.

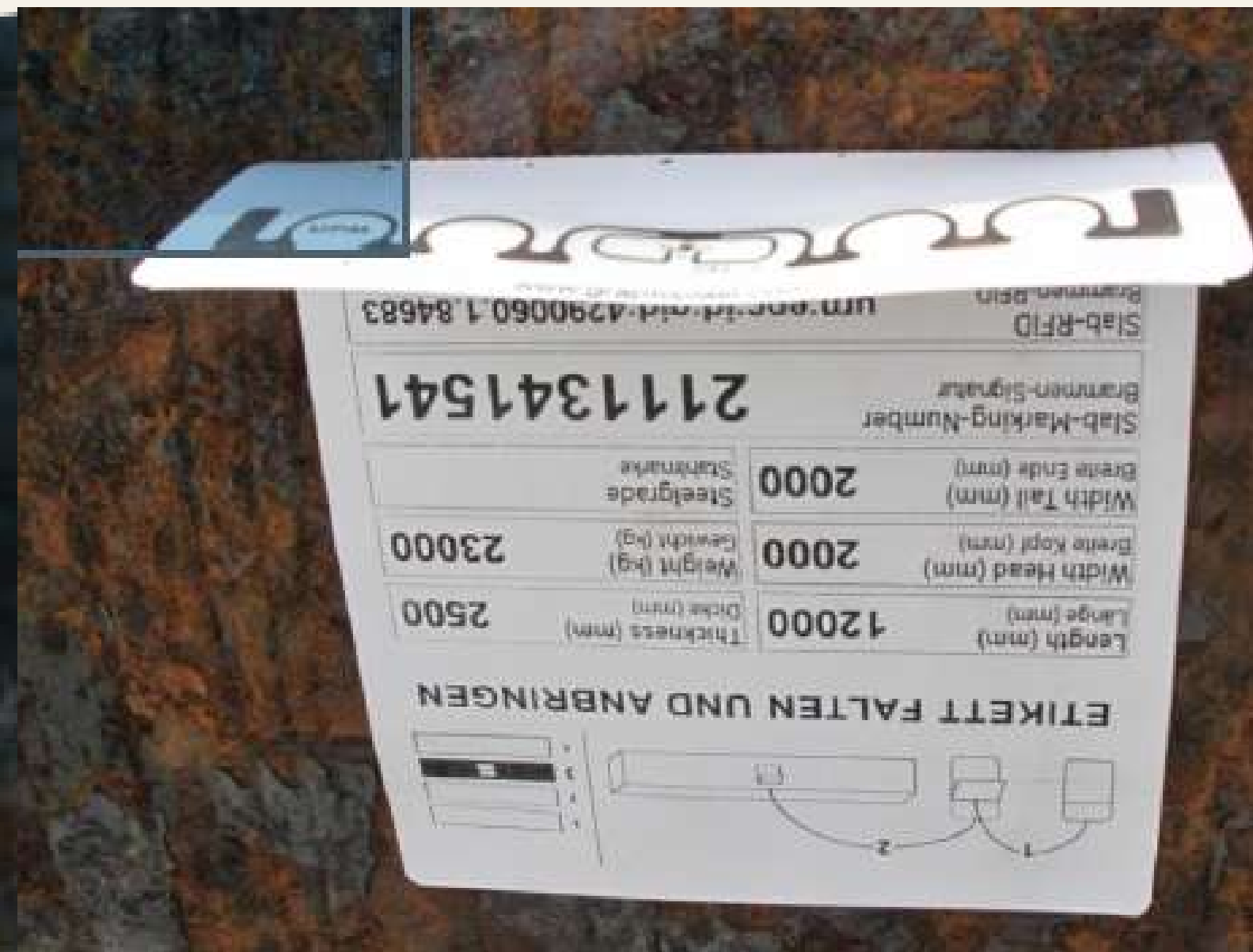
Tag IDs are then sent to the crane so that the operator knows where they need to be placed.



Solutions | Billets Detection

RFID BILLETS DETECTION

The application opens to identify the type of billet and/or assigns a progressive code automatically, taking into account the specifications of the billet in question.



Solutions | Bundles

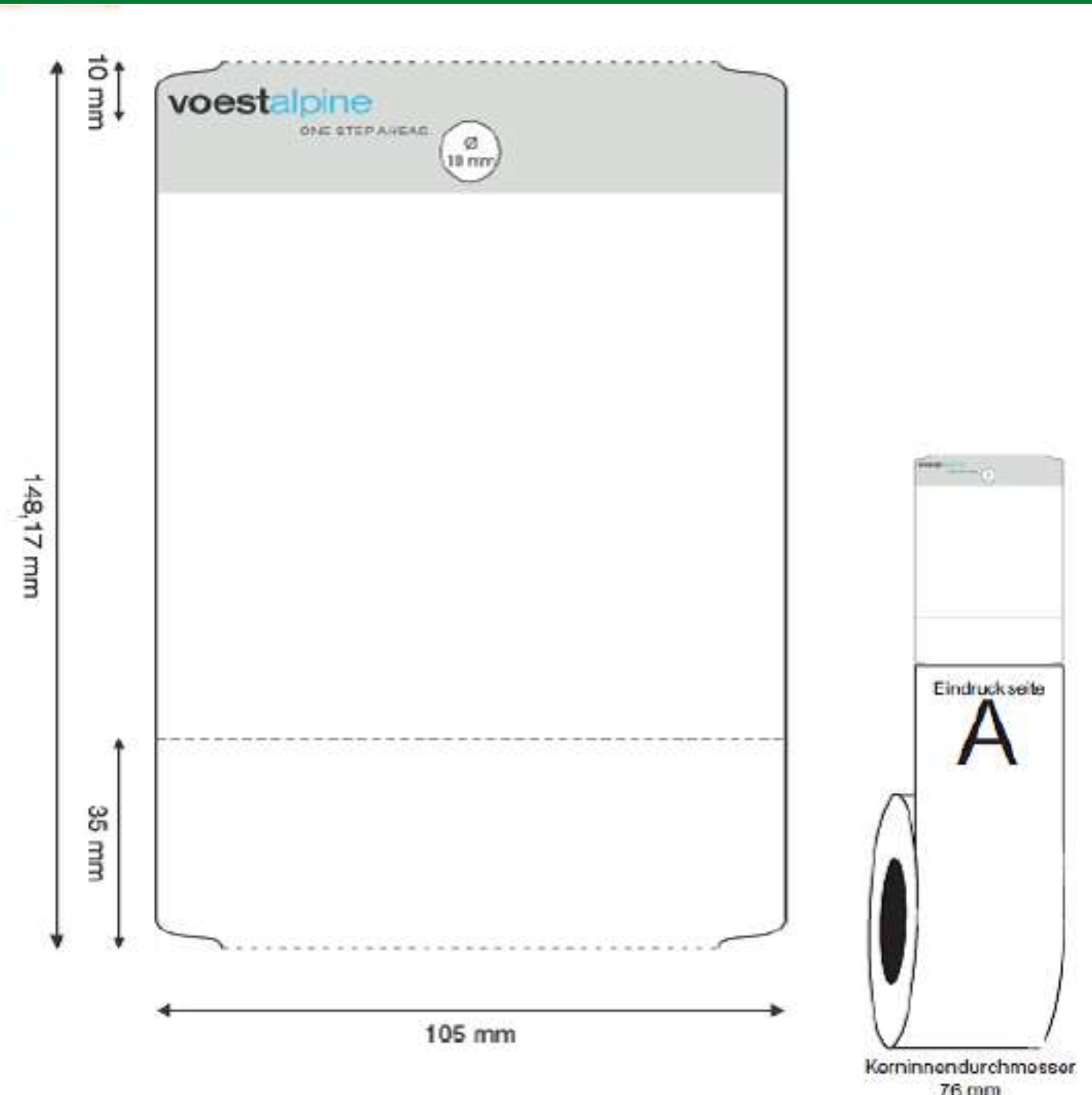
RFID TRACKING BUNDLES

RFIDs have been used in the tags that the robot welds on the bundles. Each tag, therefore, has its own RFID, which is programmed by the robot through a special antenna capable of reading / writing RFID tags.

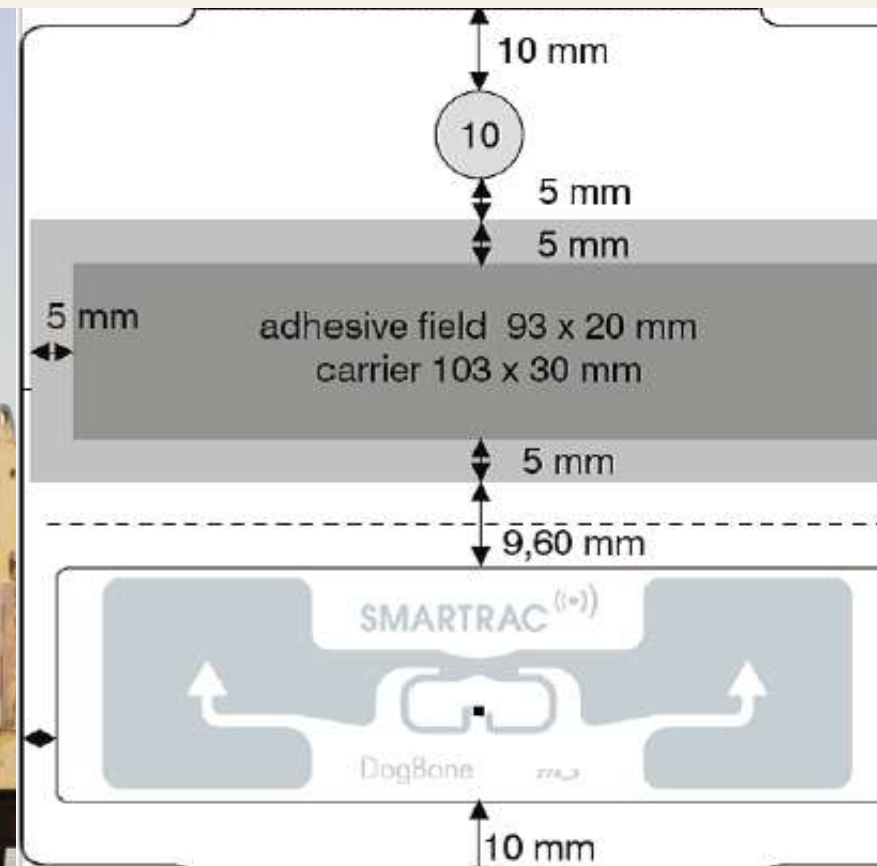
The robot, in our application, picks up the tag equipped with "virgin" RFID from the printer, moves towards the position of the antenna. It then writes the identification code of the bundle on the RFID tag and, once the writing operation is finished, it reads the tag to be sure that the code has been successfully written.



Solutions | Generic Materials



Solutions | Passing Weighs



RFID PASSING WEIGHS

When the weighing passes is able to detect and recognize the material and transmit the information to the station with the operator.

Solutions | On Board Forklifts



RFID ON BOARD FORKLIFTS

Onboard the forklift there is an antenna able to automatically extract the information on the tags and indicate to the operator the position where to take the coils.

Solutions | Access Control and Security System

RFID ACCESS MONITORING AND SECURITY SYSTEM

Fully quick and easy access monitoring for protected areas is obtained by noncontact control and logging with RFID technology.

The read/write head records the data, links it with a timestamp, and forwards it.

Moreover, changes take effect promptly.

The safety access control systems are guaranteed to allow only authenticated and authorized personnel to enter secure spaces.





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