FIG. 5

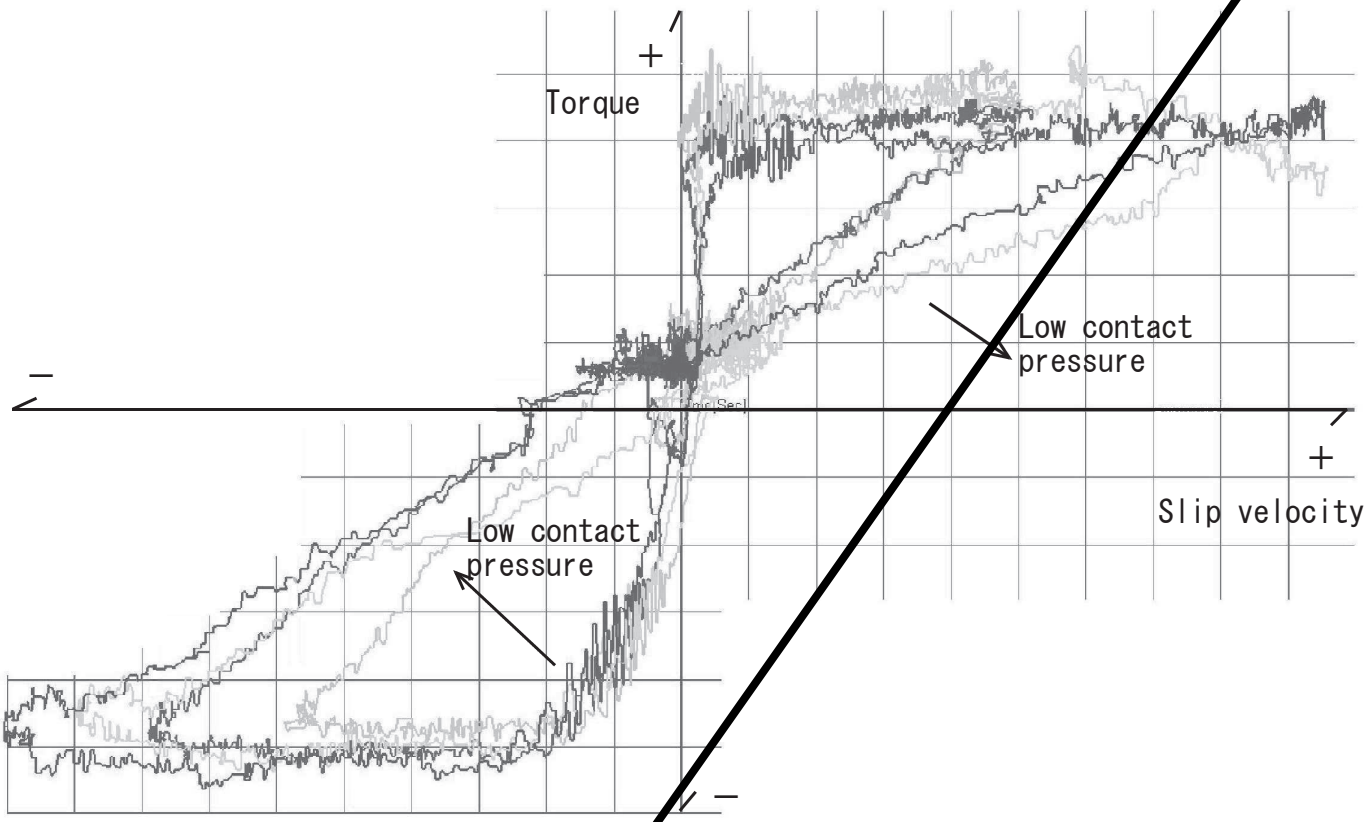

+
Torque
Low contact pressure
−
+
Slip velocity
Low contact pressure
−

FIG. 6

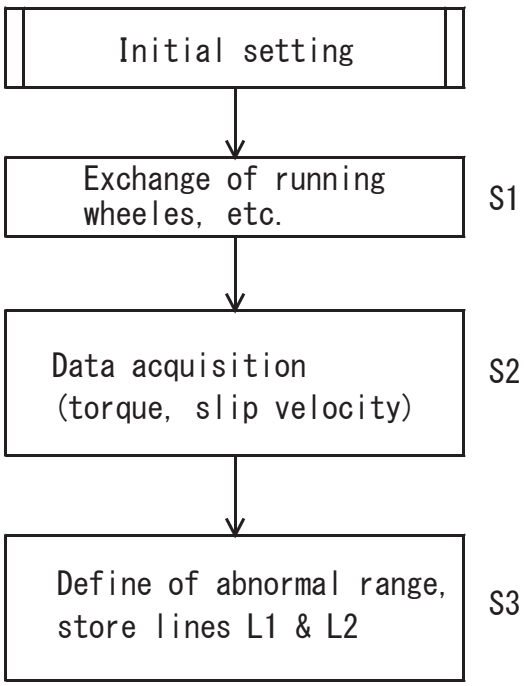

Initial setting
Exchange of running wheeles, etc.
S1
Data acquisition (torque, slip velocity)
S2
Define of abnormal range, store lines L1 & L2
S3

FIG. 8

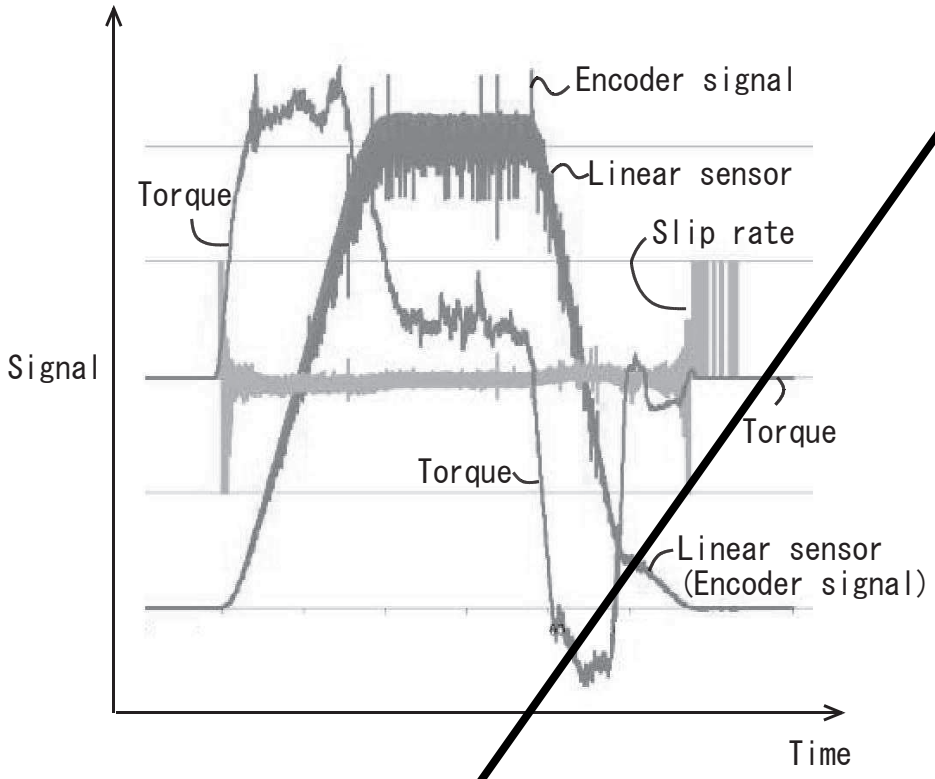

Encoder signal
Linear sensor
Torque
Slip rate
Signal
Torque
Torque
Linear sensor
(Encoder signal)
Time

FIG. 9

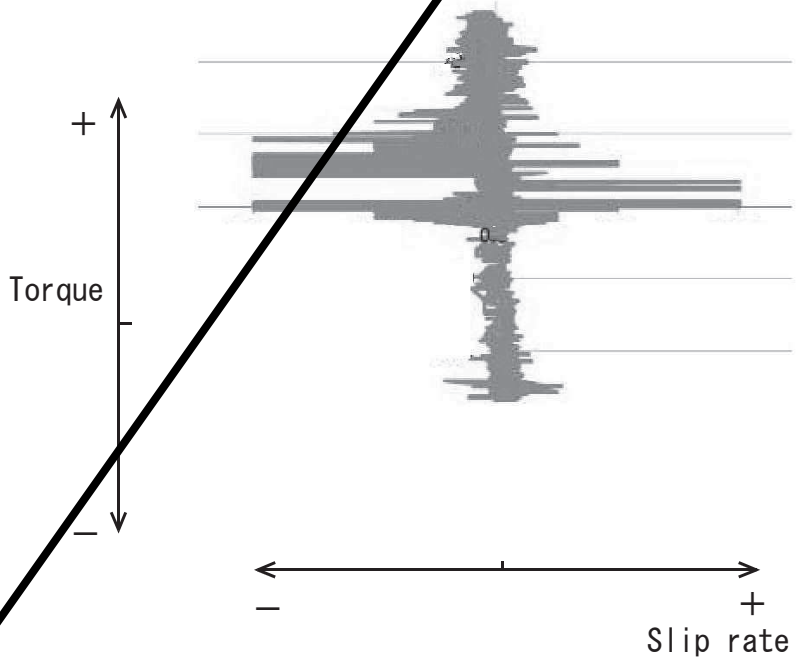

+
Torque
−
−
+
Slip rate

FIG. 5

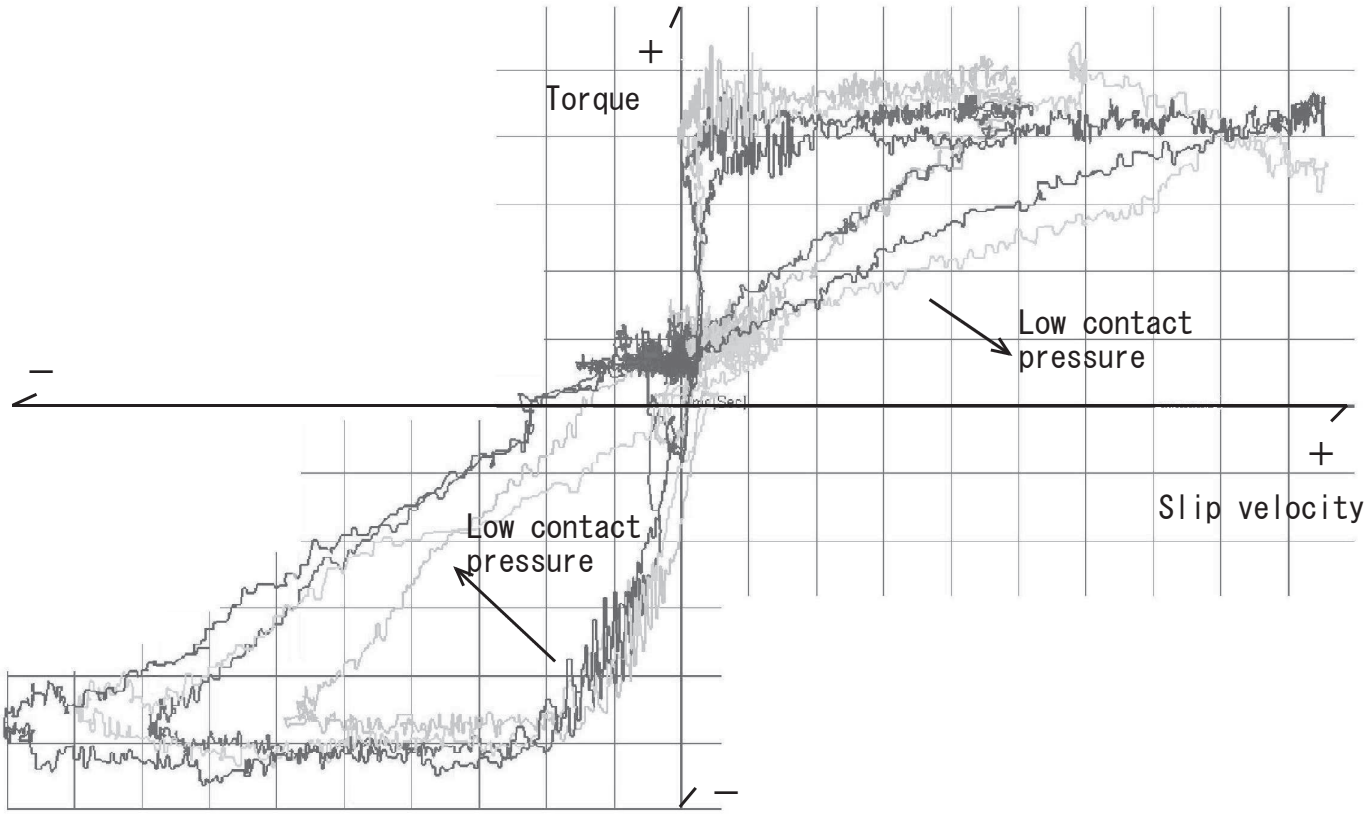

+
Torque
Low contact pressure
−
+
Slip velocity
Low contact pressure
−

FIG. 6

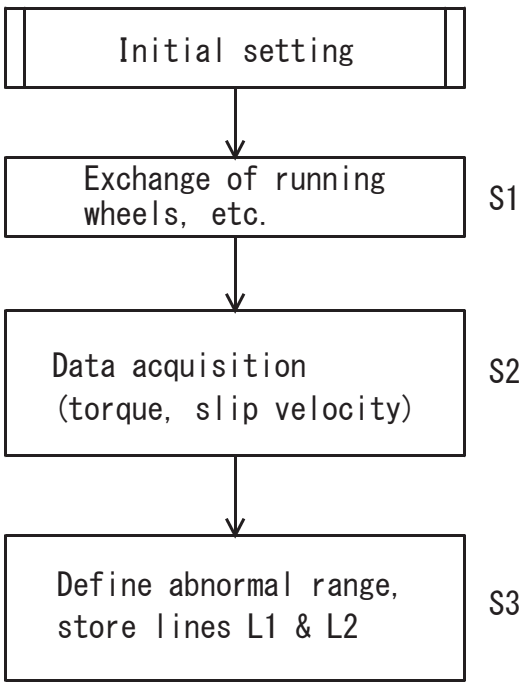

Initial setting
Exchange of running wheels, etc.
S1
Data acquisition (torque, slip velocity)
S2
Define abnormal range, store lines L1 & L2
S3

FIG. 8

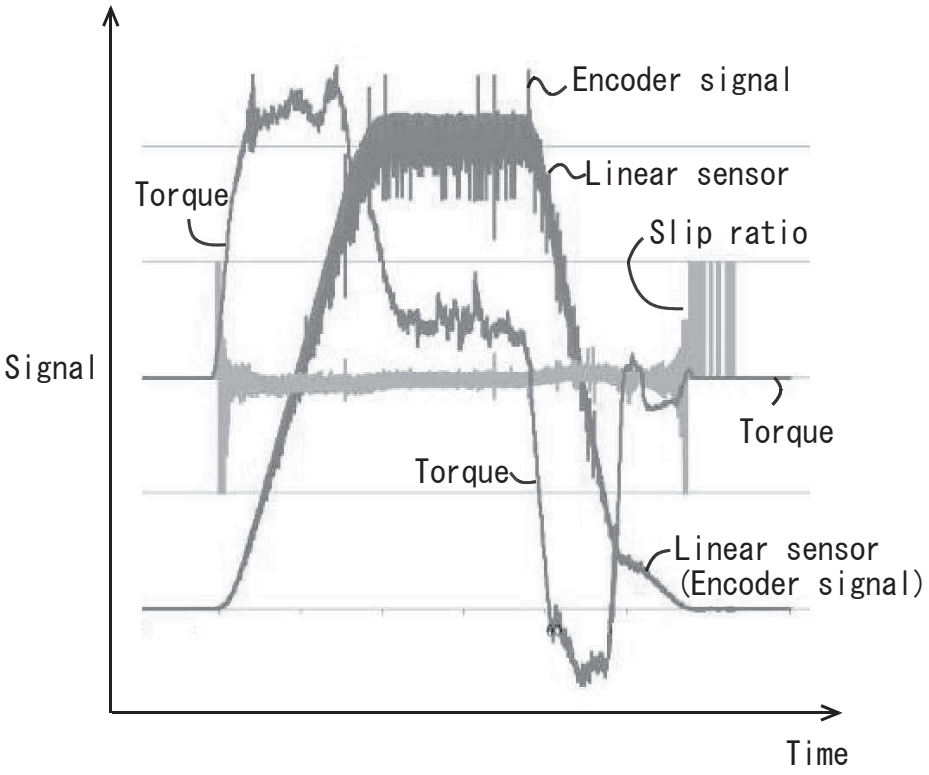
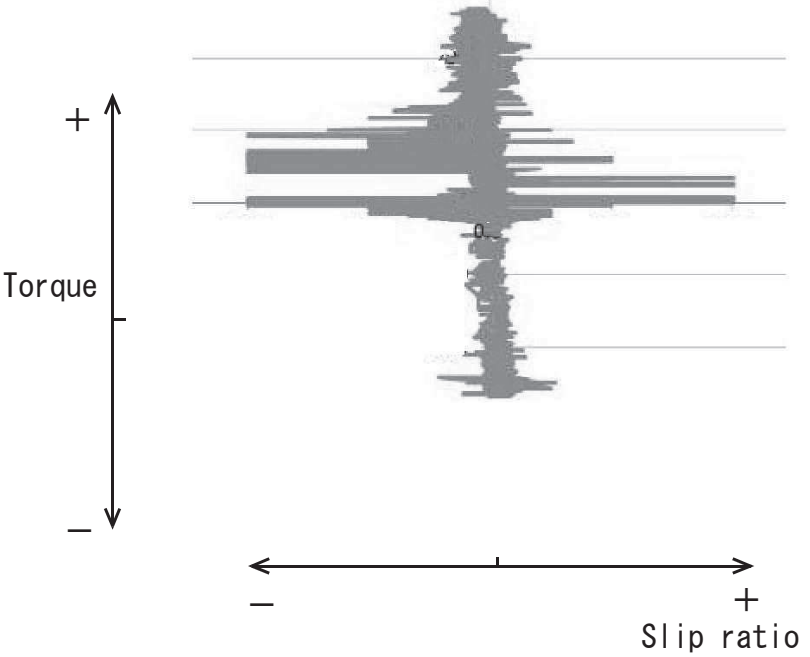

Encoder signal
Linear sensor
Torque
Slip ratio
Signal
Torque
Torque
Linear sensor
(Encoder signal)
Time

FIG. 9


+
Torque
−
−
+
Slip ratio