



Explanation of the nature of stripe magnetic anomalies without inversions

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Several scientists of different branches express doubts on the validity of the Earth's geomagnetic field inversions hypothesis [Vine F.J., Matthews D.H, 1963]. Presently a lot of information allows to link the appearance of stripe magnetic anomalies of both signs with the spreading fracture structure (horizontal segmentation of intrusions and sills, breaks in the strong crust, vertical movements of blocks), remagnetization near the borders of the blocks, hydrothermal activity.

Non-inversion mechanism of origin of linear stripe magnetic anomalies in the oceans could be explained as follows.

Ascending asthenospheric flows have been enrich with volatile components, become thinner, pressure on the walls of the lithospheric plates grows and part them. When it approaches the surface:

- horizontal tensile pressure grows,
- lithostatic pressure in the vertical column of rocks decreases,
- crust strong upper layer flakes away and begins to move horizontally.

It is important that thin magmatic and magnetic layers (further layers) of the newly formed strong upper crust move away from the ridge axis. The structure of such layers forms by horizontal stresses and so consist of the hills and depressions sequences or updip and downdip blocks heaped each other. This layer is the main source of the magnetic field and cannot be approximated by a horizontal homogeneous plate as it proved before.

In the mid-ocean ridges (MOR) the folding periods of layer depend on its thickness and rigidity and horizontal velocity of spreading. The higher velocity - the longer periods of roughness are and contrary. Same pattern is observed for the stripe magnetic anomalies distribution.

The magnetic field of the MOR forms there due to young lava flows which get thermoremanent magnetization according the current direction of geomagnetic field. Partial destruction of the relief, overlaying and creation of the new shapes occur when new magma penetrates the moved magnetic layer. The process entails partial flux reversal of rocks with the decrease of total magnetic field amplitude. The complicated magnetic field with alternating-sign linear anomalies appears.

Taking into account limited vertical thickness of the oceanic magnetic layer, the false effect of negative magnetization would appear even with short shifts of the blocks.

Conclusions.

Theoretical calculations and analysis "in situ" data prove that observation of magnetic anomalies of both signs in MOR areas are connected with fracturing tectonics, horizontal segmentation of sills, faults in the crust, vertical movements of blocks, self remagnetization near its margins.

At the present time geological and geophysical facts lead to revision of some facts of tectonic theory and rejection of the old hypothesis connected with simplified ideas of the magnetic layer regularity and cyclical nature of magma flows.

The main task of this work is to return scientists to the initial point of stripe magnetic anomalies discovery and general revision of the oceanic crust's structure without the limitations of Vine–Matthews–Morley hypothesis. Please fill in your abstract text.