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Imported Oil Logistics to Central and Southern Europe Refineries

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Abstract : Countries of Central and Southern Europe have a typical feature: oil consumption in the region exceeds own commodity production capacity by far. So crude oil import prevails in the region's crude oil consumption structure. Transportation using marine and pipeline transport is a common method of the imported oil delivery in the region. For certain refineries, in addition to possible transportation by oil pipelines from seaports, oil is delivered from Russian oil fields. With the view to these specific features and geographic location of the region's refineries, three ways of imported oil delivery can be singled out: oil delivery by tankers to the port and subsequent transportation by pipeline transport of the port and the refinery; oil delivery by tanker fleet to the port and subsequent transportation by oil trunk pipeline transport; oil delivery from the fields by oil trunk pipelines to refineries. Oil is also delivered by road, internal water, and rail transport. However, the volumes transported this way are negligible in comparison to the three above transportation means. Multimodal oil transportation to refineries using the pipeline and marine transport is one of the biggest cargo flows worldwide. However, in scientific publications this problem is considered mainly for certain modes of transport. Therefore, this study is topical. To elaborate an efficient transportation policy of crude oil supply to Central and Southern Europe, in this paper the geographic concentration of oil refineries was determined and the capacities of the region's refineries were assessed. The quantitative analysis method is used as a tool. The port infrastructure and the oil trunk pipeline system capacity were assessed in terms of delivery of raw materials to the refineries. The main groups of oil consuming countries were determined. The trends of crude oil production in the region were reviewed. The changes in production capacities and volumes at refineries in the last decade were shown. Based on the revealed refining trends, the scope of possible crude oil supplies to the refineries of the region under review was forecast. The existing transport infrastructure is able to handle the increased oil flow.

Keywords : European region, infrastructure, oil terminal capacity, pipeline capacity, refinery capacity, tanker draft
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