the reputation loss assessment can be quantified to address the time-dependent reputation characteristics (Dunbar and Schwalbach, 2000). These reasons are also applicable to the reputation-threat factors introduced by both E&P 6.54/246 (1996) and Hokstad and Steiro (2006).

2.4. Reputation loss indicators in pipeline accidents

An event is categorized as an accident if it is unavoidable, unexpected and unintended, according to E.A. Suchman (Khan and Abbasi, 1999). An accident gives little warning but happens rapidly, and negligence and misjudgments can be involved in leading to its occurrence. In regard to onshore pipeline accidents associated with explosions, the number of fatalities is the highest concern and carry greater impact than more “routine” fatalities, such as car accidents (Roth, 2003; Mohsin et al., 2014). Multiple fatalities originated from an explosion of hazardous pipelines causes higher societal than individual risk (Jo and Ahn, 2005). The possibility for regulation intervention is greater for an event involving a high number of fatalities, hence threatening company survival (Henselwood and Phillips, 2005). Nevertheless, individual risk has to be included while evaluating societal risk in order to obtain the risk acceptability (Jo and Crowl, 2008).

Publicly reported onshore pipeline accidents generate negative responses from stakeholders. These responses are of major concern for pipeline owners, as their reputation is at stake if stakeholder expectations are not achieved. This negative feedback is considered in the process of identifying the indicators or factors that contribute to the loss of the pipeline owner’s reputation. For example, an accident that causes fatalities and catastrophic environmental damage is perceived to show a lack of corporate social responsibility, causing social misunderstanding and consequently risking the company reputation (Spence, 2011). The worst impact of an accident creates additional negative perceptions from various types of stakeholder. Due to these perceptions, it is best to choose major onshore pipeline accidents cases to further analyse the indicators of the post-accident reputation loss of the owner.

Table 2 shows the percentage of the causes of pipeline accidents in the past 30 years of the study, conducted in Europe, North America and the former Soviet Union. Regardless of the causes of pipeline accidents, oil and gas companies will certainly encounter hurdles concerning their reputation. The effect is only a matter of time; when the company was found not guilty, reputations remained unchanged, and vice versa.

Reputation loss is considered a risk measure due to the violation of the ethical rules or standards of a society, and the reduction of company’s market shares after an accident has been calculated in previous studies (Cravens et al., 2003; Hokstad and Steiro, 2006; Money and Hillenbrand, 2006). For instance, consider the Deepwater Horizon accident on April 20, 2010, which killed 11 people, split 4.9 million barrels of oil, and sank the whole oil drilling rig operated by British Petroleum (BP) in the sea of Gulf of Mexico.