



## BÜYÜK ENDÜSTRİYEL KAZALARIN ÖNLENMESİ VE ETKİLERİNİN AZALTILMASI HAKKINDA YÖNETMELİK

Resmi Gazete Tarihi: 30.12.2013 Resmi Gazete Sayısı: 28867  
Mükerrer

### EK-3

GÜVENLİK YÖNETİM SİSTEMİ İLE İLGİLİ OLARAK YÖNETMELİĞİN 10  
UNCU VE 11 İNCİ MADDELERİNDE BELİRTİLEN PRENSİPLER VE  
BİLGİLER İLE BÜYÜK ENDÜSTRİYEL KAZALARIN ÖNLENMESİNE  
YÖNELİK İŞLETMENİN ORGANİZASYONU

## Güvenlik Yönetim Sistemi Modülleri :

**A – Organizasyon ve Personel**

**B – Büyük Kazaların Belirlenmesi ve Değerlendirilmesi**

**C – İşletim Kontrolü**

**D – Değişimin Yönetimi**

**E – Acil Durumlar İçin Planlama Modülü**

**F – Performansın İzlenmesi Modülü**

**G – Denetleme ve İnceleme Modülü**

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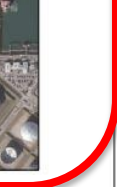
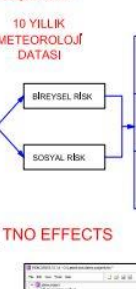
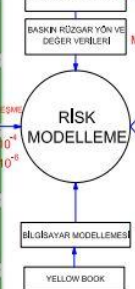
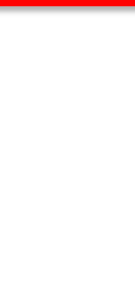
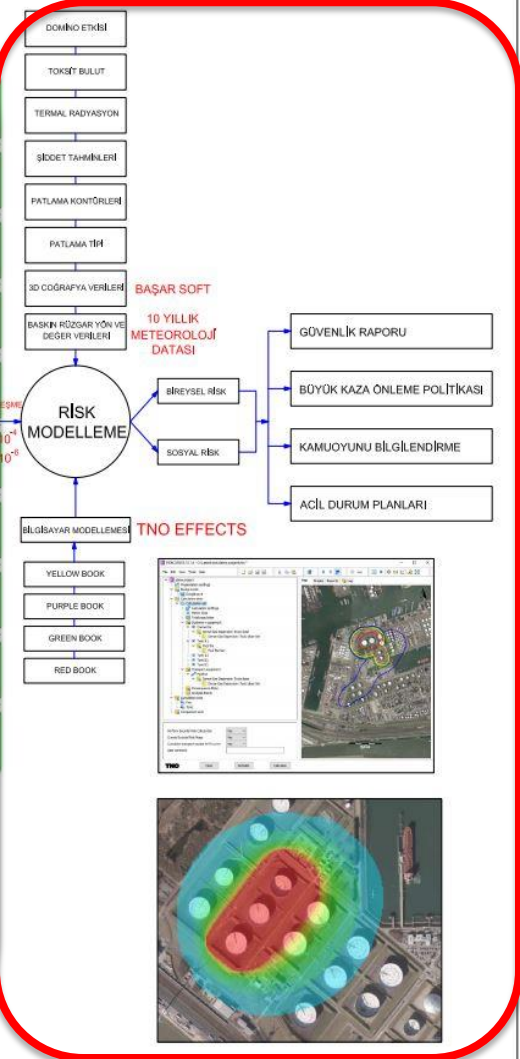
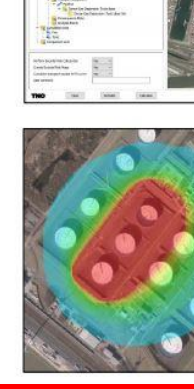
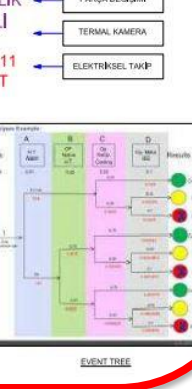
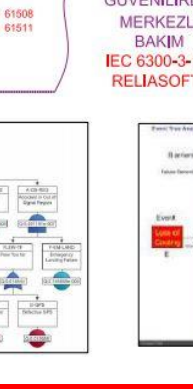
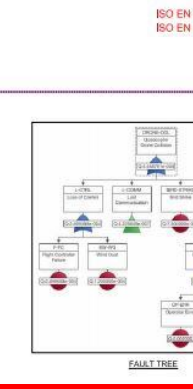
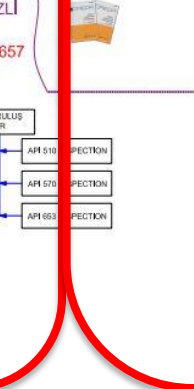
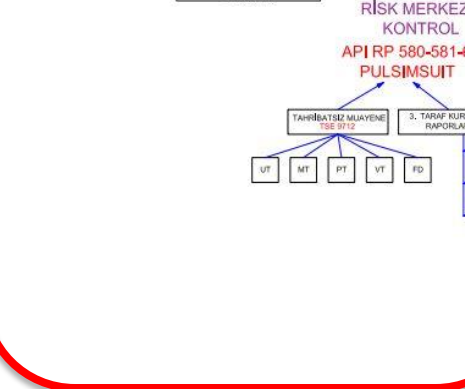
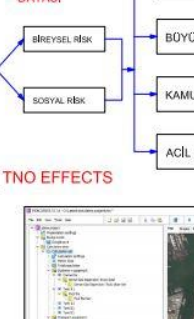
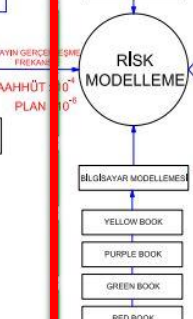
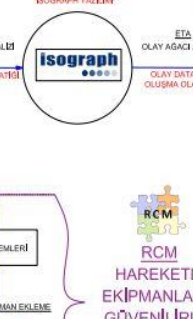
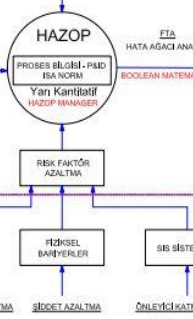
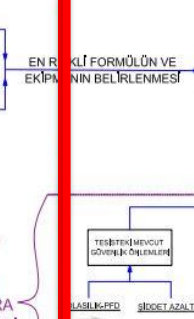
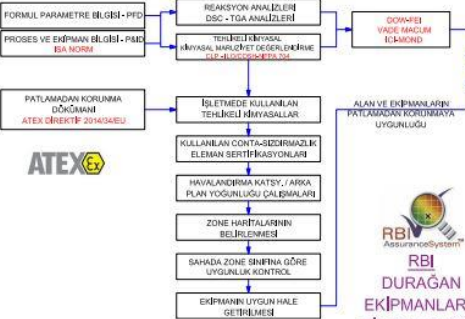
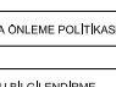
# B.E.K.BELİRLENMESİ VE DEĞERLENDİRİLMESİ

**dyo**

**OSEDA**  
REEL, HEXONMOBİL, İP GİRİŞİ  
SHORE PLATFORMLARININ  
PROSES FİREKA RAPORU  
SONUÇLARINDAN ÇIKARILAN  
GENELİC HATA DATASI

**HAZOP RİSK MATRİSİ**  
HAZOP EKİBİ KARAR VERİR  
İŞLETME TARHİNDE OLMUŞ MU?  
ENDÜSTRİ TARHİNDE OLMUŞ MU?

**SPAR-H YÖNTEMİ**  
**TESEB**



# B.E.K.BELİRLENMESİ VE DEĞERLENDİRİLMESİ

**dyo**

**OSEDA**  
SHEEL, HEXANMOBİL, İP GİRİ  
OFFSHORE PLATFORMLARININ  
PROSES ENERJİ RAPORU  
SONUÇLARINDAN ÇIKARILMIŞ  
GENELİC HATA DATASI



**SPAR-H YÖNTEMİ**  
**TESEB**



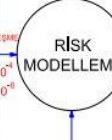
**ISOGRAPH YAZILIMI**



- DOMİNGO ETKESİ
- TOKİSİT BULUT
- TERMAL RADYASYON
- ŞİDDET TAHMİNLERİ
- PATLAMA KONTROLERİ
- PATLAMA TİM
- 3D COĞRAFYA VERİLERİ
- BASKIN RÜZGAR YÖN VE DEĞER VERİLERİ

**BAŞAR SOFT**

**10 YILLIK METEOROLOJİ DATASI**

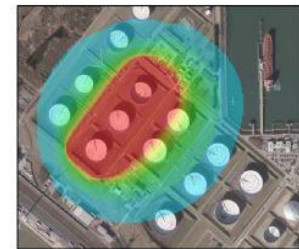
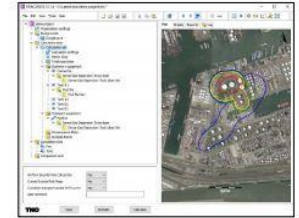


- İKİSİYEL RİSK
- SOSYAL RİSK

- GÖVENLİK RAPORU
- BÜYÜK KAZA ONLEME POLİTİKASI
- KAMUYU YUNU BİLGİLENDİRME
- ACİL DURUM PLANLARI

**TNO EFFECTS**

- BİLGİSAYAR MODELLEMESİ
- YELLOW BOOK
- PURPLE BOOK
- GREEN BOOK
- RED BOOK



**EN RİSKLİ FÖRMÜLÜN VE EKİPMANIN BELİRLENMESİ**

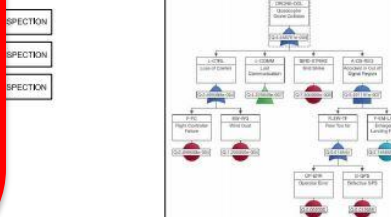
**HAZOP**  
PROSES BİLGİSİ - PİMD  
İSA NORM  
Yarı Kuantitatif  
HAZOP MANAGER

**RİSK FAKTÖR AZALTIMA**

**TEŞHİHİ MEVCUT GÖVENLİK ÖLÇÜMLERİ**  
**HİSİSEL BAKIMLAR**  
**SİS SİSTEMLERİ**

**OLASILIK-PİMD**  
**ŞİDDET AZALTIMA**  
**ŞİDDET AZALTIMA**  
**ÖNLEYİCİ KATMAN EKLEME**

**ISO EN 61508**  
**ISO EN 61511**



**FAULT TREE**

**RCM**

**RCM HAREKETLİ EKİPMANLARA GÖVENLİRLİK MERKEZLİ BAKIM IEC 6300-3-11 RELIASOFT**

- TİTREŞİM ANALİZİ
- AKTİVASYON TESTLERİ
- PARÇA DEĞİŞİMİ
- TERMAL KAMERA
- ELEKTRİKSEL TAKİP

**RCM**



**EVENT TREE**



- TAHHÜTSÜZ MUAYENE
- UT
- MT
- PT
- VT
- FD
- API 510 SPECTATION
- API 570 SPECTATION
- API 653 SPECTATION

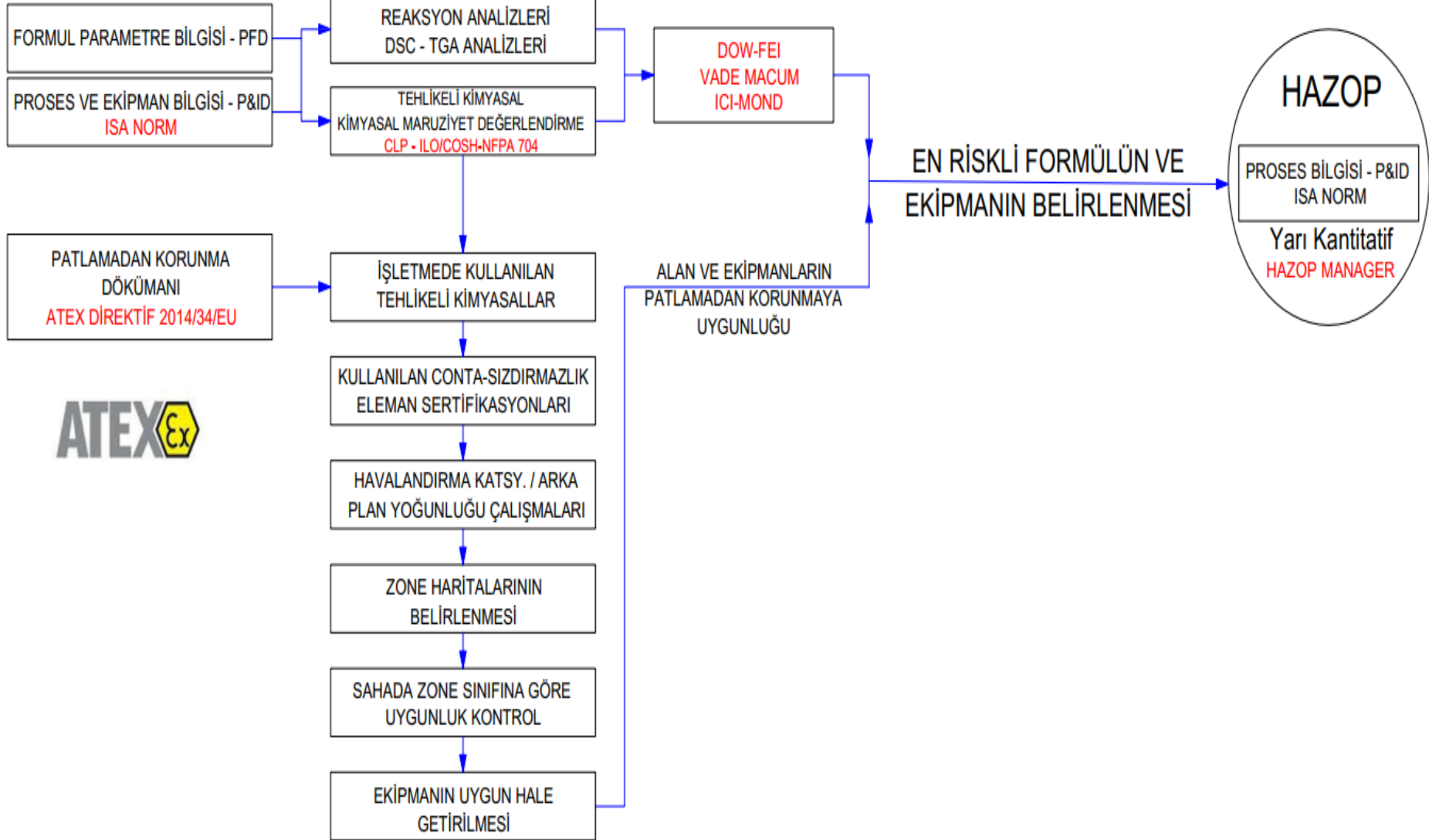


- FORMÜL PARAMETRE BİLGİSİ - PİMD
- PROSES VE EKİPMAN BİLGİSİ - PİMD
- İSA NORM
- PATLAMADAN KORUNMA DÜĞÜNÜMÜ
- ATEX GÜVENLİLİK 2014/34/EU
- İŞLETMEDE KULLANILAN TEHLİKELİ KİMYASALLAR
- KULLANILAN CONTASİZDİREKLİK ELEMAN SERTİFİKASYONLARI
- HAVALANDIRMA KATSİY. / ARKA PLAN YOGUNLUĞU ÇALIŞMALAR
- ZONE HARTLARININ BELİRLENMESİ
- SAHADADA ZONE SINIFINA GÖRE UYGUNLUK KONTROL
- EKİPMANIN UYGUN HALE GETİRİLMESİ



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**SÜREÇ AKIŞI**









SHEEL, HEXONMOBİL, BP GİBİ OFSHORE PLATFORMLARININ PROSES FMEA RAPOR SONUÇLARINDAN ÇIKARILMIŞ GENERİK HATA DATASI

HAZOP RİSK MATRİSLERİ  
HAZOP EKİBİ KARAR VERİR  
İŞLETME TARİHİNDE OLMUŞ MU?  
ENDÜSTRİ TARİHİNDE OLMUŞ MU?



SPAR-H YÖNTEMİ  
TESEO

OLASILIK, FREKANS  
GEN.HATA DATASI

ŞİDDET

İNSAN HATA  
ANALİZİ

RİSK FAKTÖR  
BELİRLEME

EN RİSKLİ FORMÜLÜN VE  
EKİPMANIN BELİRLENMESİ



ETA  
HATA AĞACI ANALİZİ

BOOLEAN MATEMATİĞİ

ISOGRAPH YAZILIMI



RBI  
DURAGAN  
EKİPMANLARA  
RİSK MERKEZLİ  
KONTROL  
API RP 580-581-657  
PULSİMSUIT

TESTESKİ MEVCUT  
GÜVENLİK ÖNLEMLERİ

FİZİKSEL  
BARIYERLER

SİS SİSTEMLERİ

OLASILIK-PFD

ŞİDDET AZALTMA

ŞİDDET AZALTMA

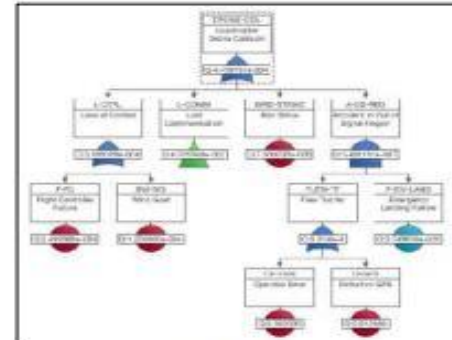
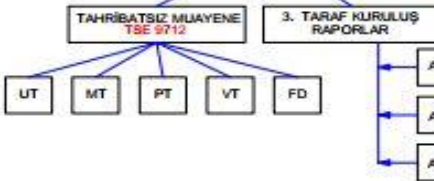
ÖNLEYİCİ KATMAN EKLEME

ISO EN 61508  
ISO EN 61511

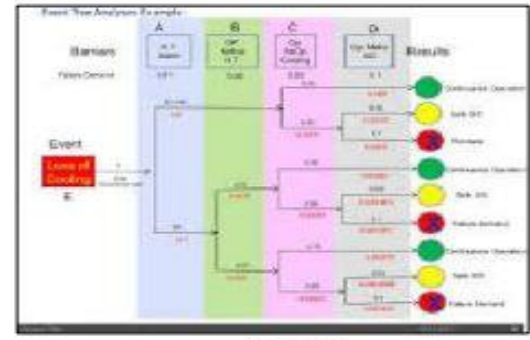


RCM  
HAREKETLİ  
EKİPMANLARA  
GÜVENİRLİK  
MERKEZLİ  
BAKIM  
IEC 6300-3-11  
RELIASOFT

- TITREŞİM ANALİZİ
- AKTİVASYON TESTLERİ
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- ELEKTRİKSEL TAKİP



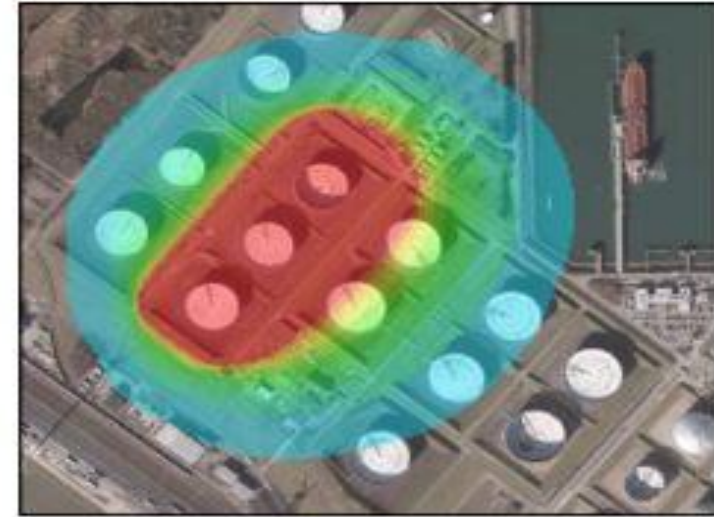
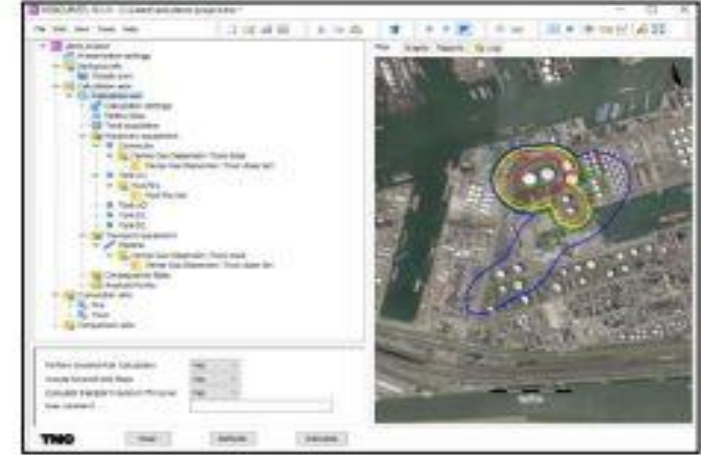
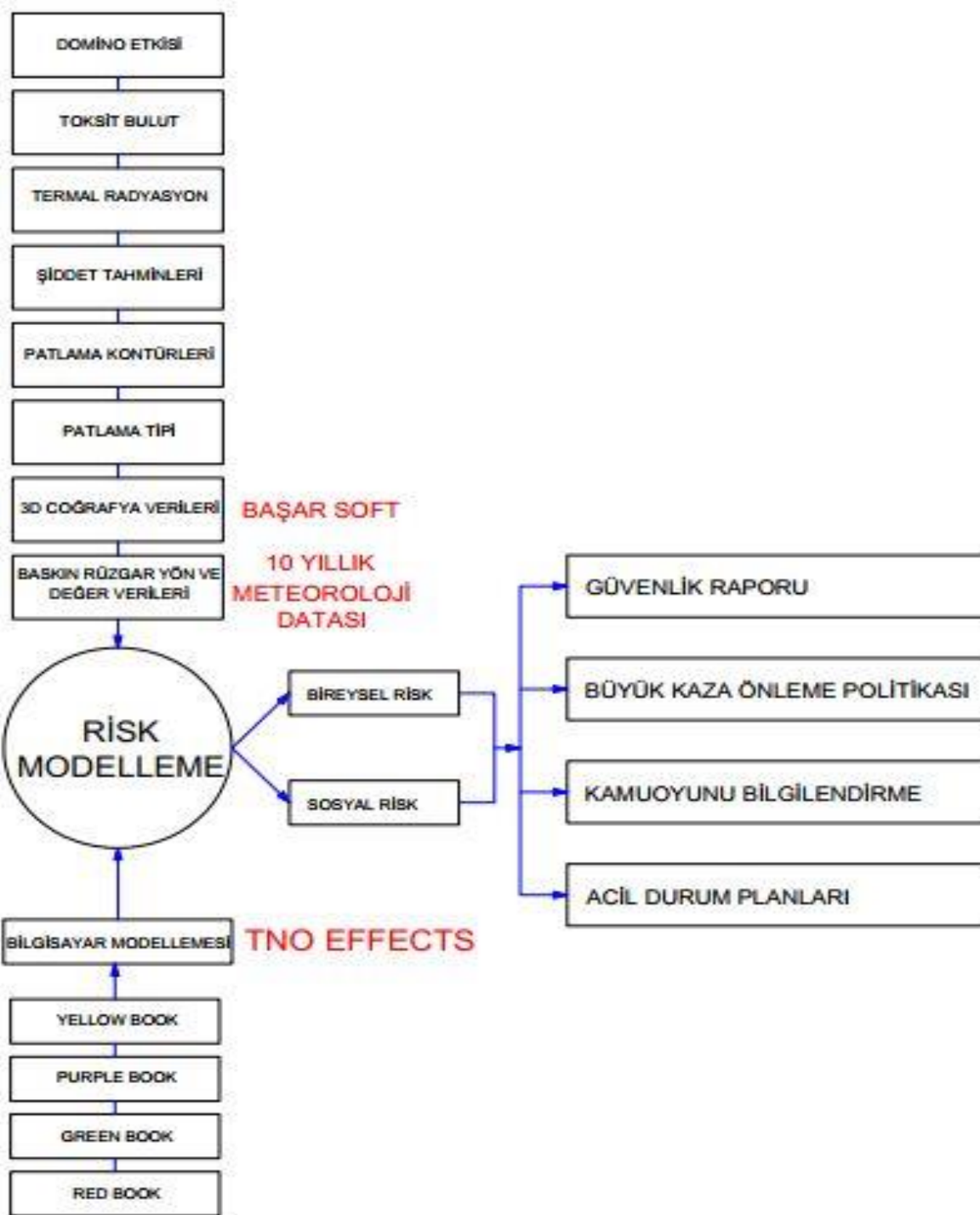
FAULT TREE



EVENT TREE

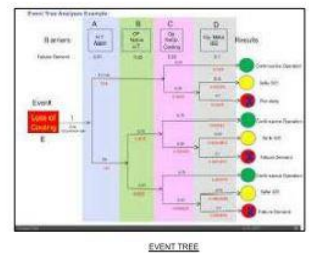
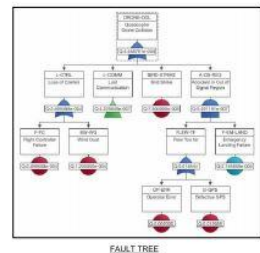
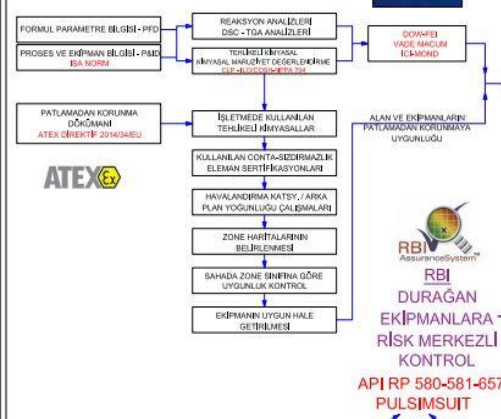
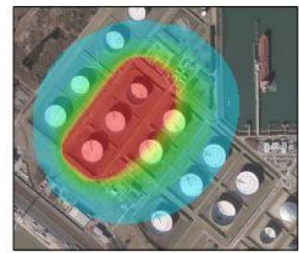
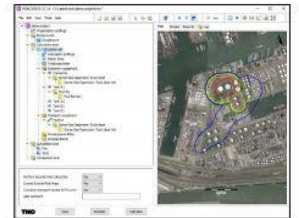
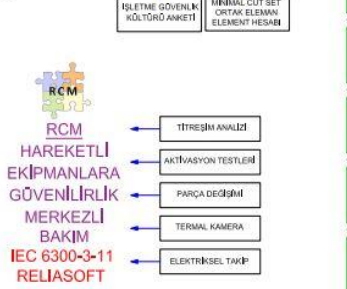
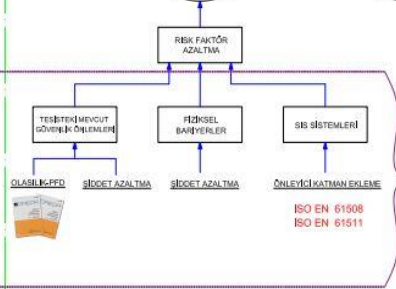
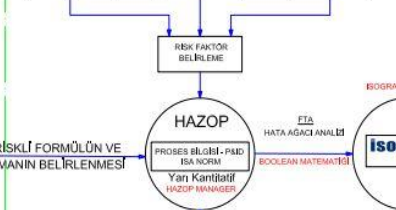
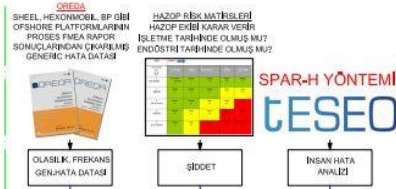






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**dyo**



**SÜREÇ AKIŞI**

KOCAELİ SANAYİ ODASI

PROSES  
EMNİYETİ SEMPOZYUMU

