

# ADVANCED SEATS FOR TWO WHEELERS & THREE WHEELERS WITH SEATBELT

*All seasonal two-three wheelers seats seatbelt and with other attachments for handicapped person and normal people*

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**Abstract**—The present study experimentally occurred some observations and that observations with conclusion that shows results, when we are using two wheelers it does not have appropriate seating posture even sports bikes also have such kinds of problems. sports bike seating posture may have comfortable driving but due to forward lean position for a long time also have disadvantages like spine problem, disc related problem, posture deformities in regular bikes and trikes. so forward lean and backward lean people can able to use same seats with supportive system or different seats according to their need. people who travels more than 20 km and above could get its benefits. it is also helpful for forward and backward lean for sports bikes and normal bikes. in sports bikes or expensive bikes they designed their seats with inner seat curves and it is helpful for driving with appropriate posture, but the person who uses bike for his daily livelihood is facing these problems, so to tackle such problems our team invented the seat with attachments and posture correction instruments for bikes, trikes, scooty, e-bikes and e-trikes. we also can design this seats for four wheelers also. Advanced seats includes non metallic ( recycled plastic) and metallic parts according to need. plastic parts and structures of seating supports mounted on designed base made for comfort, lowering weight and lowering price. this solution is providing support for spine and whole body support for relaxed driving experience with posture correction attachments and we change dimensions according to need.seatbelt is given for safety purpose in case co-passenger slept it will help them to keep steady on seat. it is also helpful patrolling purpose so that it will be helpful to police personal, defence personal, paramilitary personal, emergency service provider and mobile bike ambulance so it can helpful to save lives. it has luggage attachments at backside

**IndexTerms**—seatbelt, defence personal, emergency services,comfort, safety.

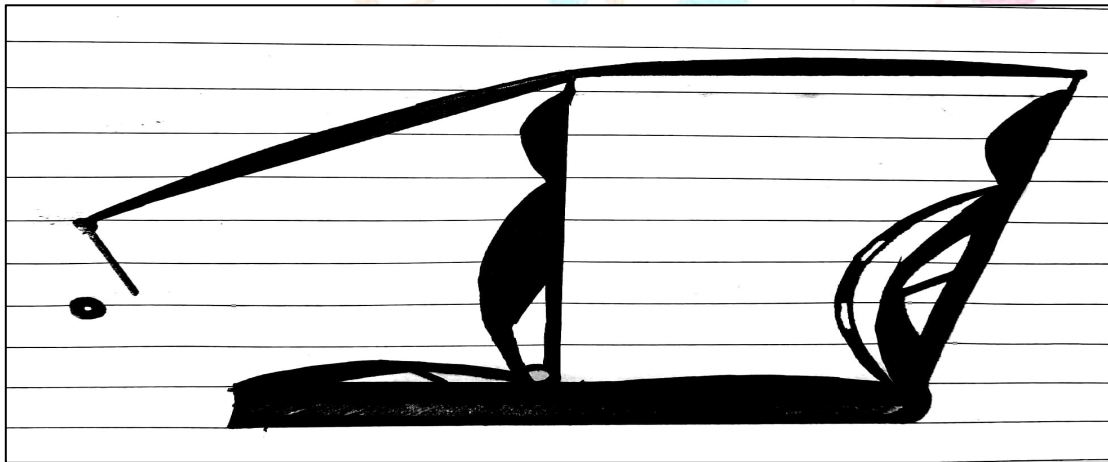
## I. INTRODUCTION

Now a days people who uses 2-3 wheelers are facing problems after using vehicles for long time and also due to inappropriate body seating posture. spine problems, disc problems, bone-muscle problems and many posture deformities. To tackle such problems our team derived advanced seat with all seasonable modifications. it is derived from recycled plastic material that plastic is mounted in specific structure and cushion material is attached with it for comfort and in perspective of safety. it has rotatory motion with 180 degree turn due to which we can use it with our comfort. we can design it according to person and we can easily detach its structures. it has 270 degree turn for back seat because indian lady as co-passenger seats one sided and also for patient. seatbelt is generally given for children and co-passenger. backseat is adjustable seat for lady, child, patient, handicapped person according to their size and need. It will provide comfort and safety to co-passenger. this advanced seat will provide all seasonal support. It is attached with fabric with blend of polyester and nylon. it will give advantages like follows. 1) In summer it will protect from heat and direct contact of sun. it will be helpful for skin safety and body. 2) In winter it will protect cold due to which it is easier to travel in winter. it will reduce direct contact of cold air and passenger so mostly important for child and patient. 3) In rainy days it will protect from rain, heavy rain drops. so it will cut direct contact of a person and weather. In rainy season it is totally helpful for co-passenger but partially helpful for driver. It also has seat belt and seat adjustment sleeping posture. it is mainly helpful when travelling with small kids, handicapped person, person with mental issues or patient, lady passenger. it is mainly helpful in emergency conditions. It has attachments for bags and luggage. from safety perspective some safety features are added into this in case of accidents the risk of injuries is reduced. It is mainly helpful for middle class families, handicapped person, defence personal, police person, emergency service personal, mobile ambulance services on bike. It is affordable in price.

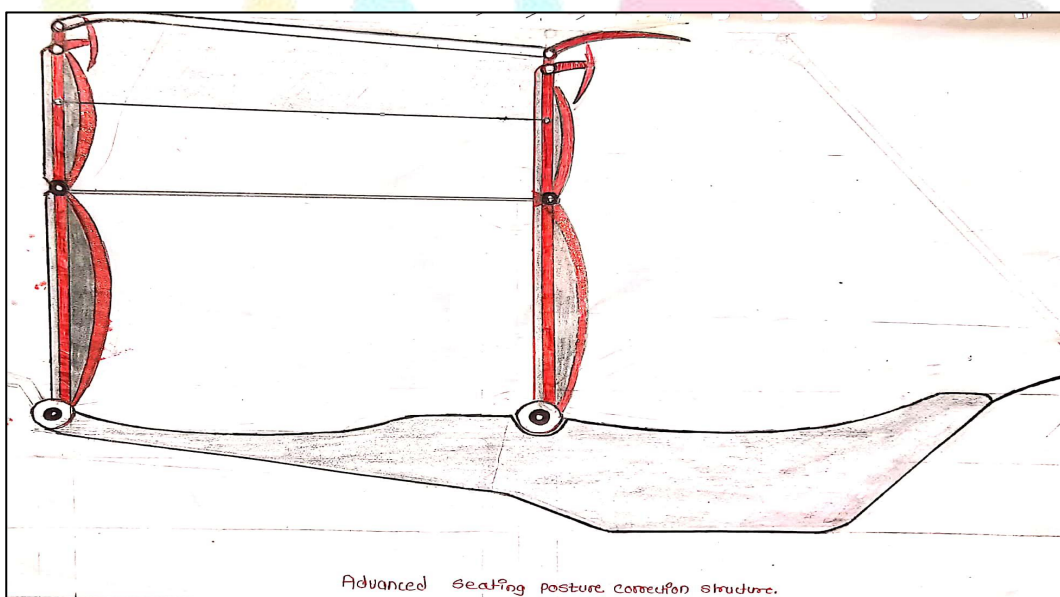
## II. METHOD

It is generally divided into 4 sections 1) Designing. 2) Molding. 3) Assembling. 4) Coating. Primary procedure is designing of structures of metallic and non metallic material with required dimensions with aerodynamic design. designing of seat is mainly prepared by using design softwares. it is followed by making moulds of structure, in other hand categorywise plastic is divided. recycled plastic is used according to required strength and dimensions. plastic is passed through shredding procedure then followed by moulding it by melting the plastic. plastic pellets of required colour is added with adhesive solution. whole solution is added into mixer and melter then it passed through melting and solution is filled in moulds and sealed with metal cap. whole moulded is passed through vacuum procedure where adhesive ness of material works better with pressure and temperature treatment. it will help to get strengthly plastic structures. secondary procedure moulding completed as per standard procedure. cushion material cut down of required dimensions and attached with seating structure made of plastic then followed by covering of cushion by fabric of nylon and polyester to protect seat from all seasonal effects like heat, sun exposure, rain, cold, wind etc. Assembling is the next procedure in which assembly of all structures is done by mounting all attachments on bike or trike. then attachments of adjustable cover included in seat is fitted in seat then followed by seatbelt attachments and hooks for luggage on backside of it. next procedure is to remove non required part of seat take towards finishing procedure cutting and drilling. in cutting that part is cut down according to edge to edge fitting and adjustments. then it sent to last procedure where coating is done with additional designing graphics and logo with this heat retallient coat is also added as per requirements. also non corrosive material coated as outer layer. whole seat is sent for quality maintenance & check department. in other hand slider is attached with seat. whole checking is done in perspective of safety, seat belt check, bending or any material deformities, attachments and detachment time. after quality check it is sent to packing department for wrapping and packing of material.

## III. DIAGRAMATIC REPRESENTATION.



Primary design of advanced seat.



Advanced seating posture correction structure.

Secondary design of advanced seat.

#### **IV. RESULT AND DISCUSSION.**

Advanced seat totally absorbed small and medium shocks and reduced intensity of higher shocks. seats also helps in suspension part. It is passed in different tests like accident test, heavy rain test, heat test, high high exposure test, cold test, wind test. Its design is aerodynamic so that it will help to avoid air resistance. it is mainly important for army personal, police personal, defence personal, paramilitary person, emergency service personal, mobile bike ambulance, firefighters, handicapped personal, lady and child so it can be used for diverse of things. this is also useful to person who is suffering from back pain problems, posture deformities, spine or bone problem. it is most important for riders and people who uses bike, trike for their daily livelihood. it improves safety and comforts of travelling. it gave better results for backward and forward lean bikes as well as for trikes. it also helpful in icefall region and rock falling in hilly areas. it is affordable in price.

#### **V. CONCLUSION**

Advanced seat is helpful for posture correction, spine related problems and disc problems occurred due to driving or improper seating posture. it protect people from all seasonal activities. it is also alternative solution for single used plastic and it is affordable in price. it helped defence personal, emergency service personal, patient, handicapped person and everyone who uses bikes and trikes for their daily livelihood. it is also helpful for betterment of services, health and safety at affordable price.

#### **V. ACKNOWLEDGMENT**

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